No. 11.

NEW-YORK:

PUBLISHED BY E. BLISS AND E. WHITE,
No. 123 Broadway.
1824.

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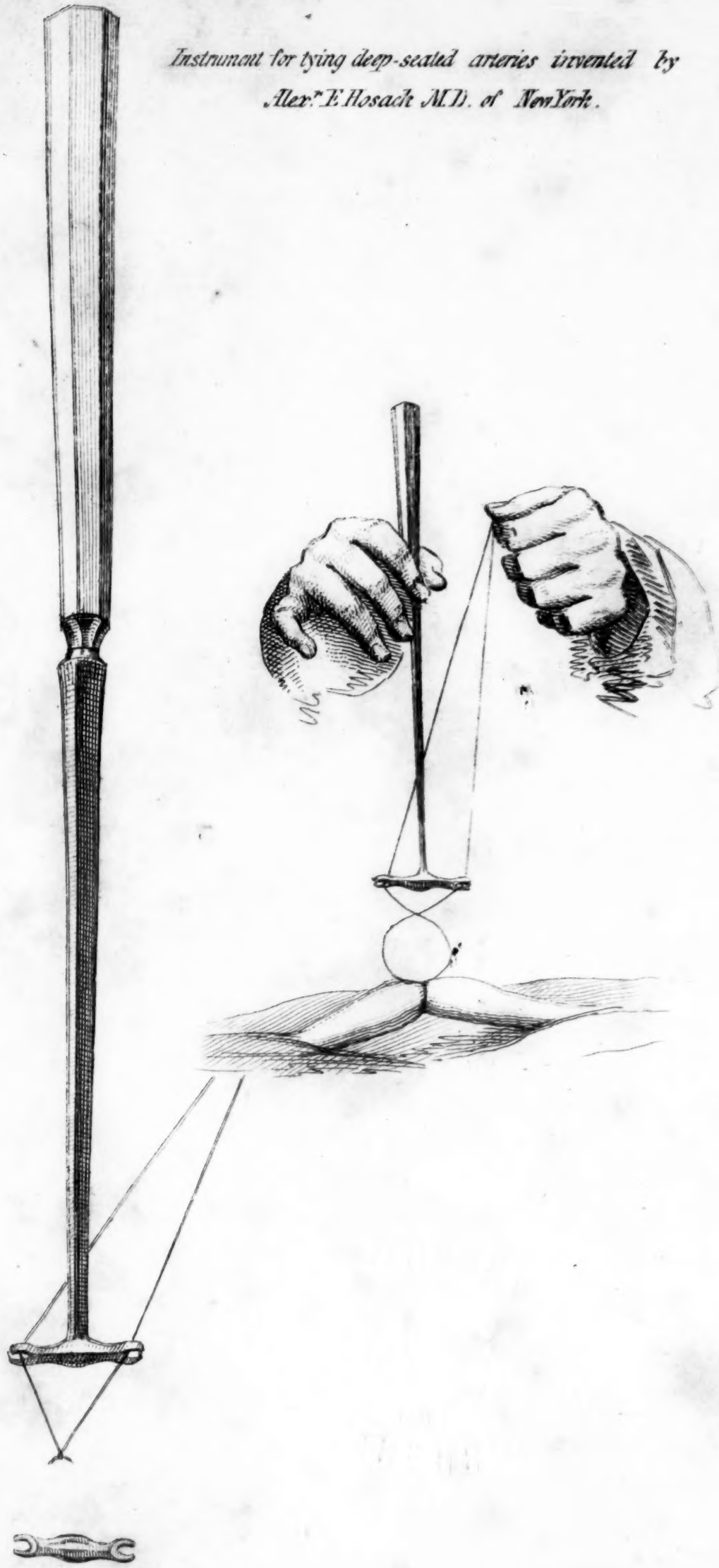

NEW-YORK

MEDICAL AND PHYSICAL

JOURNAL.

VOL. III.] JULY, AUGUST, AND SEPTEMBER, 1824. [No. III.

ART. I. SOME *general remarks on the use of the* STETHOSCOPE, *as an aid in forming a correct diagnosis of Diseases of the Lungs, together with some observations on the symptom called by M. Laennec, Pectoriloquy.* By JOHN BELL, M.D. one of the Physicians of the New-York City Dispensary.

"Nostra enim *ætas incuriosa* quoque *suorum;* et si quid novi ab homine coævo in medio ponitur, risu ut plurimum ineptisque cavallationibus excipiunt: quippe facilius est aspernari quam experiri."—LAENNEC.

THE diagnosis of the diseases of the organs contained in the chest is peculiarly difficult, not only from the nature of their structure and the form of the parts enveloping them, but from the striking similarity of the symptoms they exhibit when in a state of disease, whether arising from a derangement of function, or an organic change. Enclosed in a firm and almost unyielding bony case, (a security which their importance to

the animal economy seems to require,) they are, in a great measure, removed from our observation, and exhibit but few of those changes, either to the eye or the touch, from which our diagnosis is usually formed.

From this circumstance we have been obliged, in most cases, to look to the good or bad performance of the functions of these organs, for our opinions with regard to their continuance in or variation from a healthy state; and, as is daily obvious to every practical man, no decisive opinion can be correctly drawn from such meagre data. For often a chronic inflammation of the mucous membrane of the bronchiæ is mistaken for the early stage of a pulmonary consumption, and *vice versa*, a confirmed phthisis for a harmless catarrh; and an extensive organic disease of the heart, deranging its structure, and marching gradually but undeviatingly on to a fatal termination, unchecked by the most vigorous efforts of medicine, presents the same symptoms to a common observer as those produced by the nervous irritation arising from various slight causes, which the most simple remedies often effectually remove. "O quantum difficile est dignoscere morbos pulmonum!"* From this view of the matter, it should seem that we ought to look with complacency upon any one who attempts to cast a single ray of light upon this dark subject, and receive with gratitude any invention which promises to aid us, instead of sneering at every new discovery, and regarding every recent improvement as an unwarrantable innovation.

The first considerable improvement upon the older physicians in the diagnosis of the diseases of the heart and lungs was made some eighty years since by Avenbrugger, a German physician. This was either never very widely circulated, or if once known, was forgotten, till it was revived a few years since by the celebrated Corvisart, whose attention was first turned to this subject by personally suffering from an organic disease of the heart, which eventually proved fatal: not, how-

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* Baglivi.

ever, till he had written the best treatise upon the diseases of that organ which has ever appeared. The German's improvement consisted in what he called *percussion*—striking a moderately hard blow upon the chest with the ends of the fingers, and then judging, by the sound, of the state of its contents; the healthy lungs giving a hollow sound, and the diseased a flat, dull one, like a blow upon the muscular part of the thigh. The advantages to be derived from this mode of investigation are very considerable, and with a due degree of caution, and with a reasonable portion of practice, will be found to aid much in forming a correct diagnosis of this numerous and obscure class of diseases. Few individuals have profited by this improvement in our country, the great mass of the profession remaining ignorant or indifferent with regard to it; while in many of the French hospitals it is as much a part of the regular routine of the first examination of a patient, where thoracic disease is apprehended, as the feeling the pulse, looking at the tongue, or an inquiry into the state of the bowels.

In cases of ossification of the semilunar valves of the aorta, the passage of the blood from the left ventricle into the aorta, or perhaps its regurgitation from the artery into the ventricle, produces a hissing sound, which may be heard oftentimes very distinctly at the distance of several feet. The observation of this circumstance principally led to the application of the ear directly to the surface of the chest. M. Laennec, a French physician, a pupil of Corvisart, and one of the ablest and most learned individuals of his profession, improved upon this discovery by applying a hollow cylinder of wood between the observer's ear and the patient's chest. This simple instrument, in his hands, produces astonishing results, as certain and determinate as the introduction of the finger or probe into fistulous openings or diseased cavities communicating externally. His situation as chief physician to an extensive hospital, has brought under his observation a great number of cases of diseases of the chest; has given him daily opportunities of applying his instrument; and, what is of infinitely more importance to

his discovery, has enabled him to test the accuracy of his diagnosis by a *post mortem* examination, a course in that country perfectly consonant with public opinion and common usage. Indeed, by the help of this simple wooden cylinder, his diagnosis is so minutely accurate in most cases, as to astonish an observer who is unacquainted with the mode in which he ascertains the data necessary to form his judgment. A striking instance of this skill was exhibited in a patient who was suffering from pulmonary consumption. Upon examination, he stated, amongst other particulars, and the remark was entered in the clinical record of the hospital, that this patient had a small ulcerous cavity in the left lung, directly under the clavicle. After the patient's death, the thorax was opened, the lungs drawn out and cut into, but no cavity was found : here seemed to be a failure, but upon a more close examination of the surface of the lung, a small depression was observed, surrounded by a rough edge, and communicating by a minute opening with one of the bronchiæ. Upon looking at the inner surface of the chest, a corresponding depression was noticed, with a similar rough border, showing that there had been an adhesion between the pleura of the lungs and that of the ribs, constituting, in this way, a considerable cavity, probably once filled with a fluid matter ; and that, in forcibly removing the lung, this adhesion was broken up, and of course the cavity was destroyed, till the parts were again placed in apposition.

A great advantage, arising from the mode of studying these diseases, directly resulting from the use of his instrument, and recommended by him, is, that a constant reference is had to their anatomical character. Every organic change is noticed, by beginning with thes lightest irregularity of function, and gradually going on to those important lesions which lead to a fatal termination. How much superior is this mode of tracing the whole course of anatomical derangement to that pursued by Morgagni, Bonetus, Baillie, and other writers on morbid anatomy, who give us *isolated* descriptions of the diseased parts as they existed at the time of the patient's decease !

Every mode of treatment, where the symptoms alone are regarded, and where the pathological anatomy is not always kept in constant view, must be more or less empirical; and it is clearly the case that the success of our treatment, in most cases, corresponds in no inconsiderable degree with our knowledge of their morbid anatomy.

M. Laennec's instrument, (which he has named *Stethoscope*,*) and of which I shall soon give a brief description, is used—

1st. In examining the voice. By this means are detected cavities in the lungs, dilatation of the bronchiæ, and collections of fluids between the pleura of the lungs and that of the chest.

2d. In examining the respiration. In this way, the existence of peripneumony, pleurisy, emphysema, hydrothorax, pneumo-thorax, &c. is ascertained.

3d. In attending to the rattle (*rale*) produced by the passage of the air through mucus or other fluids in the bronchiæ. In this manner are discovered important symptoms in pulmonary phthisis, œdema, pulmonary catarrh, congestion of the lungs, &c.

4th. In investigating the state of the circulation—including under this head derangement of the functions of the heart, and change of structure: as dilatation of the ventricles and auricles, softening of their muscular substance, atrophy, ossification, carditis, aneurism of the aorta, &c.

The use of the stethoscope in all the varieties of thoracic diseases, and in all the stages of each variety, can be learned only in hospitals, or where it can be applied to a large number of patients so situated as to give the learner an opportunity of ascertaining the accuracy or inaccuracy of his diagnosis by actual dissection in those cases in which the disease proves fatal. For although impressions received by the organ of hearing are retained as long and with as much exactness

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* From στηθος *the chest*, and σκοπεω *I explore.*

as those transmitted by the other senses, yet it is extremely difficult to convey by words alone such an idea of a sound as will enable a person to recognise it when heard. One state of disease, however, the existence of which may be ascertained by the use of the cylinder, may be considered as an exception to this general remark. It is proposed to offer a few observations on this state; previous to which, however, it will perhaps be advisable to trace the morbid change from its commencement to that stage in which the peculiar symptom to be spoken of is most strongly marked.

In the lungs of adults, and often of children, who die of other diseases than those of the chest, small grayish white bodies are sometimes found interspersed in the substance of the lungs, varying in size from that of a pin's head to that of a pea. These are tubercles in their quiescent state, and for ought we know, are formed with the lungs in the uterus; at any rate, a disposition to their secretion and developement seems to be hereditary, and to descend from father to son in the same way as bodily or mental peculiarities. Under particular circumstances, and with particular exciting causes, these little grains gradually enlarge, those in the immediate neighbourhood of each other join, and thus proceed slowly until they acquire a considerable size. At the same time, the masses formed by this gradual development and by additions of other masses, assume a caseous or cheesy consistence, and an opaque white colour. In this state M. Laennec has named them crude tubercles. This state continues for a longer or shorter time, and is succeeded by a sort of hardening of the substance of the lungs directly encircling the tubercle, rendering it impervious to the air, and giving it somewhat the appearance and consistence of liver. Shortly after, the centre of the cheesy matter of these crude tubercles slowly softens, becomes liquid, and is evacuated into one of the bronchiæ, thus forming an empty sac with a fistulous opening. The walls of this sac put on somewhat the appearance of a surface which secretes pus. This, however, is not the generally re-

ceived opinion of the most enlightened physicians of the present day: they suppose the matter, not evacuated in consequence of the liquefaction of the tubercles, to be almost wholly secreted by the mucous coat of the bronchiæ, excited to take on this peculiar action by the irritation of the morbid change in its immediate vicinity.

The formation, enlargement, and final evacuation of these tubercles, is not supposed to be the effect of common inflammation, but an action of a peculiar kind, more nearly resembling the diseased action in scrofula. The reasons for this belief are, that inflammations of both chronic and acute kinds occur daily without being followed by any such results, and that this peculiar development comes on in cases where it cannot be referred to any preceding inflammation. A still stronger reason is, that when we find a great number of these tubercles in the lungs, they may usually be discovered in various other parts of the body; as in the mesentery, and in many of the glands. In addition to this, the vessels of the parts in contact with the tubercles bear no marks of enlargement or increased action, and the time requisite for their development is comparatively great, and the process is usually attended with but slight pain, and in many cases by none at all.

When the collections of tuberculous matter are formed, have become softened, and begin to be discharged, the case is considered to be confirmed phthisis. The existence, then, of these cavities, may be considered as a pathognomonic symptom of this nearly incurable disease. The mode pursued by M. Laennec with the aid of his instrument, will enable us to decide with great confidence and accuracy whether it exists or not. The symptom upon which this important decision is predicated, he has called *pectoriloquy*. This, I consider as the only useful application of his instrument which can ever become general in diseases of the lungs. The reasons for this opinion will be given after some remarks have been made upon the instrument and its mode of application. Every one has noticed, that upon applying the ear to one end of a stick of

timber, a slight blow, or even the scratch of a pin may be heard with great distinctness at the other. It is upon this principle that the stethoscope acts. It consists of a simple wooden cylinder, of a light, loose texture, about a foot in length, and one and a half inch in diameter, with a considerable concavity* at one end, and an opening through it of nearly half an inch diameter. Upon applying this concave end to the chest of a patient, and the other to the ear of the observer, the breathing is distinctly heard in those portions of the lungs permeable to the air.

Various and important results are acquired by an examination of the respiration by this method; but since the symptom to be spoken of depends chiefly upon the voice, it will be necessary to drop this interesting subject, and recur to the one first proposed.

When the stethoscope is applied to the healthy chest, and the person speaks, a slight tremulous feeling or vibration is conveyed to the ear, while at the same time the sound is per-

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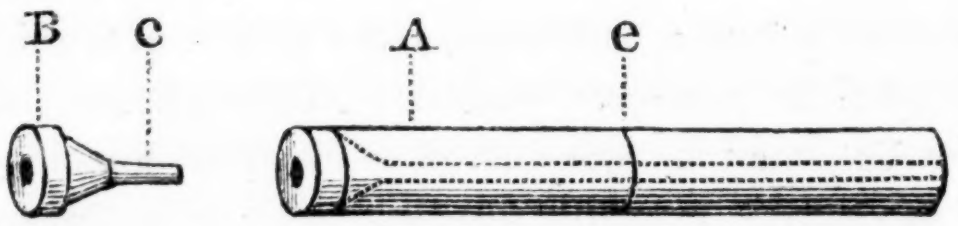
* In the examination of the voice and the heart, this concavity is filled up by a perforated piece of wood, closely adapted to it.

A correct idea of the instrument may be formed by a reference to the annexed engraving.



A, the instrument complete; the dotted lines showing the concavity when the end is removed, and the opening through the tube.—e, the point where the instrument is unscrewed for the purpose of rendering it more portable. B, the end removed, in order to use it in examining the respiration.—c, a small brass tube, which serves to retain the end in its place, while at the same time it continues the opening through the cylinder.

The stethescope has been used by Dr. Kergaradec to ascertain by the beating of the heart, whether the fœtus *in utero* was alive or not.

Dr. Lisfranc likewise, of Paris, has employed it to detect the existence of crepitation between the ends of a fractured bone.

ceived equally well by either ear, or perhaps rather stronger by the one not in contact with the instrument; but raise the concave end, and place it over the trachea, and let the patient again speak, and a sound is perceived almost precisely similar to that caused by a person's applying his mouth to the concave end, and speaking through it.* What produces this difference of sound? Unquestionably the cavity underneath; from which the conclusion naturally follows, that when this peculiar resonance of voice is heard, it is caused by a cavity opposite the end of the instrument. To this symptom, as was before observed, the name Pectoriloquy has been given, from *pectus* and *loquor* speaking from the chest, a symptom never absent in a confirmed case of tubercular phthisis.

Should the question be asked, of what use is this knowledge, since it comes only when the disease has reached such a stage as affords little or no hope of recovery? the answer is, that as we should no longer deceive the patient by fallacious hopes, his attention would be turned to those last and necessary duties, which every reflecting man would consider himself culpable in delaying, and that we should abstain from administering active remedies, which are invariably observed to hasten, rather than delay, the fatal event.

The description of the mode, pursued by M. Laennec in ascertaining the existence of this symptom, will be imperfect, unless we follow him through the whole course of the first and succeeding examinations of a patient suffering under some as yet unknown disorder of the chest. Suppose the individual then, lying on the back, his breast uncovered; he commences by striking gently on the clavicles with the ends of his fingers, which are all drawn together toward a point, carefully noting the sound produced, and gradually continuing this percussion over nearly all the anterior surface of the thorax; the patient

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* The experiment may be satisfactorily performed, by simply rolling up a quire of paper into a cylindrical form, and making use of it as a substitute for the stethoscope.

is then placed in a sitting posture, and leans forward with the arms crossed before, the same course is pursued on the posterior surface of the chest. When any deviation from the natural sound is perceived, in any part, by this percussion, the stethoscope is applied, first to examine the respiration, and next the sound of the voice. The heart, when it is supposed the disease is there seated, undergoes a separate and careful examination. During the examination of the respiration, the patient is desired to breathe a little more frequently and fully than ordinary, as this renders more sensible any slight deviation from the healthy sound. One end of the instrument should be accurately applied to the chest of the patient, and the other to the ear of the observer, who should be so placed as to be able to apply it without being obliged to stand in a constrained position. The intervention of clothing does not sensibly diminish the sound, provided there is no friction between it and the end of the instrument, a circumstance very liable to occur where the clothing is of flannel or silk. Indeed a fold or two of linen often enables us to apply the instrument with more accuracy to the inequalities of the chest, so often produced by the emaciation attendant on diseases of the thoracic viscera. Neither fat nor anasarca seem to impede the transmission of sound. The patient's room should be still and quiet; if not perfectly so, the observer may stop up the ear not in use.

Proceeding in this way, it is easy to ascertain the existence of this peculiar symptom (pectoriloquy) upon the first trial, if the learner has firmly fixed in his mind the sound perceived when the instrument is applied over the trachea; or, having it once pointed out to him, he will not hesitate, upon its second appearance, to detect it instantly. There are other diseased states of the lungs ascertained by the use of the stethoscope, of perhaps more practical importance than this; but a knowledge of them requires a long and attentive observation, and frequent dissections after death.

Pectoriloquy, though it is usually the case, does not necessarily indicate a fatal result; and that ulcers in the lungs do sometimes heal, is a fact now clearly established, although

unfortunately of rare, very rare occurrence. The rationalé of this process was never clearly understood till recently, and is in effect as follows:—The diseased cavity is first formed by the evacuation of the matter formerly contained in it: the extremities of the blood-vessels, which would otherwise open into it, are closed up by a membranous covering, which lines the whole interior of the sac, excepting the points where the bronchiæ enter. This membrane was formerly supposed to secrete the pus, which is usually evacuated. This, however, is extremely doubtful, since it has been observed, that oftentimes a patient who has expectorated immense quantities, has been found, upon examination after death, to have but a very small cavity in the substance of the lungs; and *vice versa*, those who were found to possess a cavity formed by the disorganization of one whole lung, have discharged but little matter for some time previous to a fatal termination of the disease. These two facts seem to be conclusive with regard to the opinion before brought forward, that the pus is secreted for the most part by the mucous membrane of the bronchiæ in the vicinity of the diseased spot. The tuberculous matter being evacuated, and the lining membrane being fully formed, the sides of the cavity gradually approximate, and finally adhere, thus putting a stop to the disease, till more tubercles enlarge, soften, and are discharged: and the same course may be pursued until some great cavity is formed, when the constitution sinks under its irritation.

In a female patient I saw under M. Laennec's care, there were obvious symptoms of phthisis and marked pectoriloquy. This continued for several weeks, when it gradually disappeared, and the woman was dismissed cured. About four weeks after, she returned with an acute disease of the bowels, and soon after died. Upon examination, a cicatrix of a cartilaginous consistence, formed by the closure of the two sides of the abscess, was distinctly observable just opposite the point where the pectoriloquy was heard in the first instance.

A somewhat similar case occurred the last winter in my own practice. A labouring man in Market-street, had a trou-

blesome cough of four months standing, subsequent to a slight pleurisy. Previous to my seeing him, he had taken mercury, till a gentle salivation was produced: this was kept up for ten days, and was just disappearing at the period of my first visit. I found him extremely emaciated, and perpetually harassed by a cough, followed by a daily expectoration of matter to the amount of nearly a pint, presenting in a marked degree the appearance of true pus. His pulse was small, and varied from 90 to 100 in a minute; he had copious night sweats, and a regular hectic. Upon application of the stethoscope, pectoriloquy was distinctly perceptible in a small spot about an inch and a half below the middle of the left clavicle. The mercury was wholly discontinued, and a course of tonics and wine adopted, with sulphuric acid, to check the night sweats, and a blister to the chest, kept open with the savine ointment. In about ten days, his appetite, which he had lost from the time of commencing the mercury, returned; his night sweats almost wholly disappeared; his pulse continued the same. The pectoriloquy was still evident; and though the expectoration was lessened, the cough remained as troublesome as ever. For the next fortnight he obviously though slowly improved, and I found his pulse several times below 80. His expectoration was less, and his cough but little troublesome, except upon first waking in the morning. A portion of this favourable change I attributed to the removal of a stove, which, used for the purposes of cooking, often produced in the small room in which he was confined, a high degree of temperature, oftentimes immediately followed by the other extreme. I applied the stethoscope at this time, and was surprised to find the pectoriloquy had disappeared. I attributed this change to the opening between the bronchiæ and the tuberculous cavity being filled by pus, thus preventing the entrance of the air into the cavity, a circumstance which not unfrequently occurs. Upon applying the instrument, however, for several successive days, I was agreeably disappointed in finding the pectoriloquy had completely disappeared. Under a continuation of the remedies just mentioned, his health gradually improved;

and as the warm weather of spring came on, his cough left him, and he returned to his business. He still, however, was troubled with shortness of breath upon any sudden exertion; and upon applying the concave end of the stethoscope to the upper lobe of the left lung, the respiratory murmur was found wanting in that part of the organ surrounding the spot where the pectoriloquy was formerly perceptible.

Though from the nature of this case, absolute certainty cannot be attained, we have a presumption next to it in point of strength, that a cavity did exist, and was afterwards closed up.

Numerous cases might be easily copied from notes of M. Laennec's hospital practice, but their strong resemblance would render them uninteresting; and it may perhaps be sufficient to observe, that from several months' attentive observation of his diagnosis, and from notes, taken at the bed-side, of his opinions of the state of the lungs in each case where the symptom just spoken of occurred, and all tested by dissection where they proved fatal, no error, even of the minutest kind, was detected.

The use of the stethoscope by no means obviates the necessity of close attention to the ordinary symptoms. Auscultation, mediate and immediate, percussion, mensuration of the chest, attention to the mode in which the enclosed organs perform their functions, and close observation of their secretions, all, as experience shows, furnish us with data too meagre to found a rational and successful practice upon. This affection forms in some measure an exception to the remark made in the commencement of this paper, that our skill in treating diseases, usually keeps pace with our knowledge of their pathology. The morbid anatomy of the lungs has, within a few years, been closely investigated; but the multiplied cases and dissections of Bayle and Laennec, to say nothing of those recorded in England and our own country, have produced scarcely a perceptible variation in the treatment of this class of diseases; and the physicians of the present day, are equally successful as those of a century since.

ART. II. AN *Inquiry into the Nature and Causes of* INTERMITTENT FEVERS. By FELIX PASCALIS, M. D. &c. of New-York.

I HAVE lately read much about the *sulphate of quinine*, and of its efficacy in curing intermittent fevers, as being superior to that of the Peruvian bark from which it is extracted; and have been surprised at the inconsistency of an opinion roundly accredited from a *postulatum!* For if Peruvian bark still remain a failing and doubtful remedy of simple intermittents, if it cannot guard us against a relapse of the same, it follows that its curative property, although the best we know, is yet insufficient, and the more so, as we cannot account for its failures.

Now, what is the sulphate of quinine? is it not an altered or an improved form of the original remedy? We should imagine that if *altered*, it is only by being divested of component parts left in the vegetable substance; and if *improved*, it is by the condensed and saline form of the bitter principle: in neither case can we find much reason to be benefited? The fact is, there is error or misnomer somewhere. Let us suppose, indeed, that with a few doses of cinchona, or with a few grains of sulphate of quinine, we could stop the periodical return of a paroxysm of fever, which at no long distance of time may recur again and again; is it not evident that the cause of the disease has remained untouched, and that nothing has been gained, but on the contrary, that it has probably become more deeply rooted in the system?

Thus we see, also, that we are trained by long established doctrines and rules of practice to mistakes about the nature and the diagnosis of this fever, and that we torture our art and minds to find out *specifics* against a temporary symptom, neglecting to investigate the condition of the nerves, or of the blood, which can thus disturb or waste away the vital powers, and shake violently the whole frame at the very foundation and sources of life. It is with a wish of retracing our steps, and taking a more correct view or theory of the subject, which

will consequently lead to a more successful practice, that I invite the attention of the reader to some remarkable circumstances, and which are as yet unaccounted for in the history of intermittent fever.

1. It is contracted in moist, low, marshy, or drowned lands; in long-continued rainy seasons in spring or autumn; also occasionally in the humid exhalations from meadows, or other overflown situations. In all parts of the world, nations can designate some districts in their territories, where, from similar causes, intermittent fever is endemic. Some are of opinion that cold must, in some degree, be added to moisture. This circumstance I do not think absolutely necessary. Intermittent fever is a disease of all seasons and climates; and it is well known, that under a warm or moderate temperature, humid exhalations frequently give to intermittent fever a complicated or malignant character, and also affect various sorts of cattle with some kind of disease. It is, however, always the case, that moisture, cold or warm, is required, or is evidently predominating in any atmospheric or local constitution favourable to an epidemic of fever and ague; and yet we will show hereafter that something else besides moisture is the cause of intermittent fever.

2. We are all liable to take it, without any particular predisposition from age, sex, or from constitution. It has been supposed, that persons of delicate or irritable nerves, who are more under the influence of moral and physical impressions, are more subject to it. Be this as it may, it would not prove a peculiar predisposition, as nervous constitutions have a greater susceptibility not only to this, but to all other complaints.

3. The types of intermittent fever are *quotidian*, *tertian*, and *quartan*. These have been subdivided into *double tertian* and *quartan*; again, into triple *tertian*, *quintan*, and *sextan*. The last are perhaps more imaginary than real. Who could tell, however, all the varieties of type which places, habits, ages, and seasons can produce? Two things on this head are to be remarked: first, it is the progress of a quotidian to a quar-

tan, if the disease is aggravating; and its inverse march from a quartan to a quotidian, when it is verging to a cure. Thus protracted periods are bad symptoms, and the lessened are favourable signs. The other circumstance is, that in the interval of paroxysms of chill and fever, &c., no particular morbid affection seems to remain in the system, which is then wholly restored to its healthy functions.

4. Three different and well marked conditions or stages take place in each paroxysm of intermittent fever. The first is ushered in by a sense of lassitude, gaping, headache, or giddiness; then erratic pains in the limbs, with strong, and sometimes *horrid* chills, and sick stomach or vomiting, with an excessively laborious respiration, and a very small pulse; the whole surface of the body is discoloured or livid, and the skin becomes *anserine*, as the French call it, that is, goose-skin. The second stage, which the ancients called that of the *concoction*, is contrasted with the former by burning heat and redness of the body, full pulse, quick, forced, and anhelous respiration, and a profuse perspiration. The redness of the face and of the skin in this stage of the paroxysm, is strikingly similar to that which occurs in the yellow fever. At last the great uneasiness of the patient diminishes, and is succeeded by heavy pains in the head and limbs. Great discharges of lateritious urine and of alvine matter, terminate a paroxysm, which in this sort of fever is generally much longer than in any other of an acute character.

5. There are many surprising effects in the course of the disease, especially after its long continuance in the system, which have not yet been explained. First—its frequent relapses: these are the more to be apprehended, if the patient has long endured the fever, or has been often seized by it, notwithstanding his removal from moist and sickly into the most wholesome situations, and in spite of judicious treatment. Secondly—a double tertian can unexpectedly be transformed into a continued fever, connected with apparent cachexis; but this change induces either hepatic congestion, or an enlargement or induration of the spleen. Excessive debility, a morbid.

sallow paleness, or a jaundiced skin, with a bloated face, portend a chronic and vitiated condition of the circulating fluids, and considerable difficulty to bring back the whole system to its former healthy functions. In fine, intermittent fever is often connected with so many different determinations during the state of apyrexia, constituting thereby an uninterrupted succession of morbid affections, that the French have filled up a catalogue of twenty-five species and upwards of that order of fever. *(Vide Diction. des Scienc. Medical.)* Their symptoms are altogether surprising and unaccountable, such as that of a constant coma or sleep—of mania—of ptyalism—loss of memory—of a tormenting headache—of hydrophobia—of fainting, or lipothymia—of pertussis and asthma—of loss of the voice or aphonia—of a distressing catarrh—of ischuria or dysuria, and many others, which it is unnecessary to enumerate in this disquisition. I only remind the the reader that, according to diversity of constitution, intermittent fever is most probably produced by some very serious cause, and deep derangement in the primordial laws of vitality and circulation; and that, like epilepsy, catalepsy, tic douloureux, chorea, and lunacy, it remains to this day a very obscure and problematic disease, in its *proximate cause* as well as in its *diagnosis*. Let us, however, see whether by one or more of its symptoms, we may not clear our way to either of them. We take that of the periodical returns of the paroxysms of intermittent fever. Each of the diurnal revolutions of our planetary system encompasses, undoubtedly, all the functions of animal and organic life—digestion and respiration—the secretions, internal and external—motion and sleep: each of them is necessary during twenty-four hours, and each of them are to be renewed on the succeeding day. Thus "a day," says the scripture, "speaketh to another day; and the night instructs us for another night." (Psalm xix.) A certain number of those diurnal revolutions are numbered for our existence here, and it is but by changeable causes that they are shortened or lengthened. It takes 270 diurnal revolutions for the period of gestation in the womb of the mother; to which Hippocrates

added ten more, for accidental deviations from the laws of nature; which even does not lessen the number of lunations necessary to human females before they can be mothers, except in tropical and torrid regions. At each diurnal revolution we experience the same wants, and require the same quantity of air to breathe, and the same quantity of food. There is no labour or difficulty which all instinctive or rational beings will not undergo to procure that food; and to the *homo sapiens* himself a sublime precept is handed down, which circumscribes the operative phenomenon of his life to *one* day, teaching him humbly to *pray to God, and beg for his daily bread.*

In the progress of life, or of these continued diurnal revolutions, the periods of infancy, childhood, virility, and caducity, are also marked by years and months. If, therefore, every thing that constitutes our well-being, vital powers, growth, and preservation, is all afforded within diurnal revolutions, is it not reasonable that in the periodical returns of disease, we should look for the cause among the *non naturalia*, or among the objects which we do not carry within ourselves, but which are *daily* afforded to us from objects and elements which surround us, and which have been either injurious or wanting? Air and aliment are the compendium of these necessary objects; and should they be refused to us in part or in toto, diseases will grow upon us daily, or periodically manifest their symptoms and morbid effects. The daily progress of these will either be simultaneous, and affecting all the parts of the human system; or else it will be partial, and constitute a conflict or struggle between the animal and vital powers, according to the degree of injury received by either of them; in other words, a *periodical paroxysm of fever* will take place. Now, as it is clearly proved that intermittent fevers cannot be traced to a deficiency, or the bad quality of aliments, there remains only for us to investigate another important source of the elements necessary for life, and from which respiration has undoubtedly transmitted some capital injury; that is, atmospheric air. On the other hand, it is ascertained that if the human body has been long immersed in a humid atmosphere, it ap-

pears to have been deprived of an element necessary to life, and which must give energy to vitality; and, by subsequent operations in the system, this induces an intermittent fever. How can the condition of moisture in the atmosphere produce such a phenomenon, and by what positive or negative agency? This is the point within which our investigation remains confined. Moisture alone cannot be the cause of intermittent fever, or else it would often and necessarily renew that disease among one half of mankind who, by their occupations, trade, business, and by ordinary casualties, are not only exposed to, or immersed in moisture, but in water itself. That such exposures prove generally unhealthy, it is readily granted, and that they cause rheumatisms, palsies, cramps, and a variety of other complaints. These are the common effects upon persons thus exposed to moisture. Yet we do not hear of fever and ague among our washerwomen, nor among the workmen in linen, cotton, and woollen cloth manufactures; nor among the tanners, the hatters, the masons, and the sailors. Moisture, therefore, cannot, by external application to the body, be considered as a proximate cause of this disease; but it might be by internal contact with the organs of *respiration*. And for the purpose of ascertaining in what way a moist atmosphere can thus become noxious, let us for a moment advert to the laws appertaining to that most important function; and instead of conjecture, it will afford scope enough to our intellectual view and demonstration, of one of the sources of vitality which the circulating fluids receive through respiration, and which becomes defective or suspended under the external causes generating intermittent fevers. The principal laws of respiration are so much overlooked in medicine, and so seldom presented to physiologists, that I must be permitted to remind my readers—

1. That atmospheric air is at each inspiration put in contact with venal blood, at the mouths of the capillary nets of the pulmonary arteries, ramified in the air cells of the lungs.

2. That this venal blood, carried by the pulmonary artery from the right ventricle of the heart, contains much superfluous gaseous carbon and hydrogen, or carbonated hydrogen.

3. That by the concurring laws of a compressing atmosphere *in vacuo* against the external compression by the same, and of the respective affinities of divers elements, air is immediately decomposed, gives a part of its oxygen to the carbon to form fixed air, and the other to hydrogen, to convert it into aqueous vapours; both of which fixed air and aqueous vapours are thrown out at each expiration with the remaining residue of other elements; the two first compounds containing the specified quantity of oxygen which was received by inspiration.

4. That the azote of the decomposed atmospheric air is in part received in the blood, which by the departure of much carbon and hydrogen, and by the accession of two thermometric degrees of heat, drawn also from the same source, becomes florid, rutilant, renovated, and stimulant.

5. This new or arterial blood is returned to the left auricle of the heart by the pulmonary vein; from this auricle into the left ventricle, and from this throughout the whole body, having at each inspiration received two degrees of heat (20 times a minute), and at each expiration having thrown out all its superfluous carbon and hydrogen. Thus is that all important and fundamental function of life accomplished, which is called *hematose*, or sanguification.

6. Three great operations are performed at once, and they are equally necessary to life. The one is, the supply of about 2400 thermometrical degrees of heat every hour, which would be sufficient to burn and consume the body in that time, were it not exhausted as fast as it is generated, leaving only the temperature necessary for life, which is from 98 to 100°.

The second operation is, the formation by the lungs of a quantity of 40,000 cubic inches of carbonic acid gas in twenty-four hours, which give three ounces avoirdupois of carbon elicited from the blood in that time.

And lastly, the formation of aqueous vapour, by the chemical union of the oxygen of the air, and of the hydrogen rejected by the venous blood. This has been called by the ancient physiologists, the transpiration of the lungs; and it is so copious, that, as a serous fluid or vapour, it has been thought equal to all that which in the same space of time is secreted from the surface of the body. It is not within the necessary bearing of my subject to detail the importance of the decarbonizing function of the lungs, as performed during respiration; the identification of that function with the laws appertaining to surrounding elements, as proved by Lavoisier, Crawford, Davy, and by Messrs. Allen and Pepys; its direct influence on vitality and health, according to atmospheric pressure and temperature, which may render it imperfect; and its physiological forms in the auxiliary secretions of the skin and liver: all these points have already been treated of with an uncommon degree of correctness and philosophical science, by Charles E. Pearson, M. D., of Morristown, New-Jersey. (Vide Physico-Med. Trans. vol. I.) I have added another proof of the doctrine of the decarbonizing function of the lungs, by deriving from it and from sundry pathological analogies, the views and opinions I have advocated respecting the cause and diagnosis of the yellow fever. (Vide Address of Dr. F. Pascalis to the Med. Soc. of New-York, 1822.) And now I have to say, that the third function of the respiratory organs consists in the secretion of the hydrogen from the venous blood, which, with the oxygen, composes that serous fluid, or vapour, incessantly emitted by expiration. Should that function be impaired or interrupted, it becomes the cause of intermittent fever: and the better to illustrate the position, I solicit the attention of the reader to the following facts and remarks:

1. Hydrogen, or inflammable gas, is one of the component parts of water, and by the natural decomposition of animal and vegetable substances, is easily disengaged from marshes and moist grounds; being much lighter than the atmospheric air. it always precedes aqueous vapours, even in a

temperature as low as 65°, and is also mixed by aggregation with those exhalations; although in that condition it is seldom pure; it is frequently perceived by a peculiar odour like that of garlic; it is a fact, however, that the hydrogen gas from the earth and marshy places and stagnant waters, is rendered more or less deleterious by carbon, and it is then still more unrespirable to living animals, solely because it still more interferes with the laws of respiration.

2. Hydrogen imparts a bluish colour to the blood of animals: if a man be made to breathe it, his lips will soon darken and take that colour; and as water must frequently be decomposed by various processes in the human body, it is reasonable to suppose that venous blood returned to the lungs contains much superfluous hydrogen, there to be elicited from it and carried off; therefore the greater the quantity of moisture, or of hydrogen, in the atmospheric air we breathe, the less power will remain in the respiratory function to secrete the venal hydrogen, and a considerable portion of it must then remain in the circulating fluid.

3. I am not prepared to say whether humid vapour breathed with atmospheric air, is decomposed with it; or whether the pure hydrogen alone introduced into the lungs will admit some other combination with the air respired or with the arterial blood itself. In either case, the pulmonary secretion of venal hydrogen is impeded, or new hydrogen is forced into the circulation; the result will be the same; and its pernicious effects will equally take place.

4. Various experiments have been made to ascertain what would be the direct effect of hydrogen in the blood, or in the constitution, besides that of altering the florid colour of arterial blood into a dark blue colour. They give us but little light on the subject, owing to the prompt and serious symptoms of the suffocating congestion it causes in the lungs, even when injected into the veins of animals. We are, however, apprised that it is a powerful solvent of all the component parts of the blood, that it does not combine with other substances, even with oxygen, but by the means of great heat; that although

inflammable, it considerably refracts light, and extinguishes a lighted taper plunged into a receiver filled with it: we may therefore safely infer, that when passed into the circulating fluids, it is not a conductor of vitality, and disconnects their stimulating action at the points which must receive it; hence it seems principally to affect the nerves, so much as to have given to intermitting fevers the much accredited character of nervous fever; and as it is highly expansible by caloric, it is very evident that a great and artificial heat created by a paroxysm of fever, or heat applied artificially, would be very subservient to disengage it, and force it out from the pores. And no doubt this is the best remedy that nature can afford; for whatever may be the injury that a part or parts of the human body are labouring under, the irritation it causes, whether it is felt or not, is the preservative law by which all the energies of the whole system are gathered up and assembled to allay or remove it; sometimes by convulsive motions and contractions, and sometimes by a violent fever, which accelerates circulation, increases animal heat, augments all the secretions through the usual emunctories as well as through the pores of the skin. Thus admitting that a want of vitality or debility can exist in the nervous system for a while, it will not be long before this evil is remedied by a paroxysm of fever, which can replace it on a par with the wants of the system, and with the waste or expenditure which life incessantly requires; and this benefit will be extended to a certain period of time, or one or many diurnal revolutions, according to the exigency of the case, and of the possible renewal of the same cause. The most remarkable circumstance, however, and an invariable law of nature, is, that the repetition of this phenomenon obtains the sooner and the oftener within the period of one or two diurnal revolutions, according to the lessened degree of the disease which will be retarded when it is more deeply rooted in the system; because the greater the injury is that has been inflicted by deleterious causes on the vitality of the human system, the longer time it requires to gather means and strength enough to effect a curative process. Of two paroxysms of an

intermittent, within the period of a diurnal revolution, the last is always the critical, and happily carrying off the disease.

Our theory of the nature of intermittents receives no small support from that symptom more particularly observed in the paroxysm of fever, that is, dyspnœa: great difficulty and labour of respiration. It is in that organic operation that the disease commenced, by the suppression of one or many of its functions; the air-cells of the lungs having long and often been clogged with an unrespirable gas, or with moisture, they remain partly unfit for respiration, especially when they are hurried by a violent paroxysm of fever.

Another disease has also been ascribed to moist exhalation of the air, that is, the goitre. (Vid. Barton's Memoir on Goitre.) "It is certain," says Dr. Gibson of Baltimore, "that goitre prevails as an endemic disease chiefly in countries where the atmosphere is loaded with moisture, in valleys enclosed by lofty mountains, and which are exposed to the direct and reflected heat of a powerful sun." (Vid. Philadelphia Medical and Physical Journal, vol. I. p. 53.) Goitre is that species of bronchocele or tumour formed by the morbid enlargement of the thyroid gland. Its enormous size, the difficulty of its cure, with its terrible effects on the mental perceptions of persons affected by it, have been learnedly descanted upon by many ancient and modern writers. (Vid. Barton's Memoir on Goitre.) They have proved that the thyroid gland, occupying the anterior surface of the trachea, is provided with ducts pouring its secretion on the internal surface of it, and that by a retrograde disposal of it, or by a great quantity of serosity from the bronchiæ, that gland is enlarged and indurated, to the great injury and deformity of the subject, and especially females. Is not that serosity the ultimate result from a respiration impaired by a moist atmosphere, by aqueous exhalations, and by a quantity of uncombined hydrogen gas, having frequently irritated and increased the lymphatic secretion from the lungs?

I trust this is more than sufficient to show that we are much mistaken respecting the indications to be adopted in the treat-

ment of intermittent fevers; and especially by our exclusive reliance on the best preparation of Peruvian bark, or of any other specific remedy. We may with it suspend or check the symptoms, and thereby, in most of the cases, prolong the disease much beyond its natural and ordinary duration. I grant that even in several instances, an intermittent has been ostensibly and exclusively cured by the exhibition of that or of other tonic medicines: yet, let it be remarked, that it was not without one or many paroxysms of fever, which were sufficient to improve and renovate the circulating fluid, to perfect the functions of respiration, and to re-establish at par, the nervous vitality in both the organic and animal systems.

We will therefore infer that the following are the most proper and correct indications for a powerful and radical cure of this complaint, provided it be not complicated with any aggravating circumstance of malignity, or with any visceral and morbid determination; and provided also the patient is safely removed from any kind of exposure to the causes, either local or atmospheric, which have induced an intermittent diathesis.

I. To assist and correct the functions of respiration.

II. To keep up and strengthen the functions of the stomach.

III. To create a due excitement of the arterial system.

1. That there is debility or obstruction of the pulmonary organs in a simple intermittent, is to be inferred from the character of the disease itself; and it should be emphatically defined as prominent among the asthenic fevers. Furthermore, we have noticed from authority as well as from experience, that during the febrile paroxysms an intermittent was very strikingly marked with laborious and difficult respiration. The editors of the Dictionary of the Medical Sciences have from this symptom, and from its periodical return, classed it with diseases essentially bearing a diagnosis of imperfect, or of suspended respiration: such as asthma, syncope, catalepsy, neuralgia, convulsions, epilepsy, and that periodical head ache which is said to be brought on by a torpid respiration. (vid. art. *fievre*. pag. 302.) In addition to all this, the

indication of assisting and correcting the organic power of respiration is to be inferred from our theory of intermittents, as it discloses a primary cause interrupting one of its functions; one, too, which by its operation on an organ of a delicate and complicated texture, will require much time and the most correct management fully to restore its wonted elasticity and power. Who is not aware, that however timely a person may be relieved after having swallowed a poisonous substance that has been rejected, he will yet long linger under dyspeptic symptoms, or other unpleasant effects? An angina tonsillaris, or laryngitis, promptly cured, will for a long while affect the human voice; and the most successful operation for the cataract can but gradually impart the perfect enjoyment of vision.

An active remedy to shake and stimulate the lungs into perfect operation, is at first highly necessary. Emetics are therefore indicated in the treatment of an intermittent fever. They have a direct beneficial action against the torpor, the congestion, and collapsed condition of the air-cells. Tartar emetic is preferable to any other vegetable or chemical vomitive, owing to its more regular and diffusive operation on the diaphragmatic plexus and the nervous system, and its being always attended by a gentle diaphoresis. I would also recommend to exhibit this remedy in the form of a cathartico-emetic, by associating it either with calomel, or with half an ounce of glauber salts; and in order that the purging effect should not encroach too much upon the vomitive, the emetic dose should be increased by a grain or two. There are two reasons for so doing, that of cleansing the stomach and removing the bile which is more or less accumulated in diseases from defective respiration; and that of obviating any further necessity of purging the patient. The practice of giving drastics is absolutely misapplied to intermitting fevers, and is contra-indicated by the debilitating tendency, usually resulting from cathartic medicines, which will renew or prolong the complaint; and I am happy that this view of the treatment is acknowledged by recent and respectable authorities.

There are many other processes by which the chest can be expanded, and respiration invigorated and accustomed to full inspirations: these are the application of artificial heat by clothing, by hot drinks, by hot steam, by alcoholic or resinous vapours, by swinging, and by violent bodily exercises. May I be permitted to recommend also the use of electricity, during the interval of apyrexia that generally precedes the paroxysm of fever?

2. Our second indication directs the attention of the physician to the digestive functions; these can best renovate the activity and strength of the system, and hence, it was once believed that animal gelatine was a real specific in the cure of intermittent fevers. It was administered in a large dose, and in a condensed state, mixed with sugar, some time before the paroxysm of fever, which was either wholly overcome by it, or, at least, rendered milder and shorter in duration. Time and experience have proved that this favourable operation was not owing to a febrifuge virtue in animal gelatine, but only to its nutritive and invigorating effects on the system, labouring under a state of exhaustion and debility. Other facts from repeated observation have been recorded, of unexpected and spontaneous cures of intermittent fever by a large quantity of digestible food taken unadvisedly at one time by patients who would no longer submit to be restrained by the strict rules of abstinence from food. We are further shown by daily attention to our patients in this complaint, that however violently and morbidly they have been exercised by the periodical returns of fever, it is almost impossible to restrain or moderate their appetite, even under the established and very erroneous prejudice of starving a fever; and why have various sorts of tonics, bitter substances, decoctions from roots, herbs, astringent acids, and Peruvian bark, obtained an universal approbation as remedies for intermittents, if not from their power to stimulate the stomach into digestible action, and thereby to supply the wants which the body experiences in that complaint. It is not required to reduce

the system in intermittents, but to supply new blood for the assistance of vitality in a state of sufferance and diminution. Peruvian bark is an excellent tonic, it is true, not only for the stomach, but for the whole system, in which it counteracts whatever threatens or impairs vitality; but its chief use in this disorder is to increase the power of digestion, and therefore choice food must be given at regular times, and that too which is most easily digested, and is most apt to produce blood. Bark given plentifully without attention to this end, may indeed assist the patient in resisting the paroxysm expected, but it cannot cure or remove the cause. In this delicate part of the treatment, the physician ought to be guided by the usual quantity and quality of food used by his patient in the days of his best health, and never be afraid to equal it, *pro re natâ*.

Struck with the numerous failures of bark, and of every kind of specific tonics, no known species of which can be exclusively relied on, Darwin has said that "the cure of intermittents depends on its (bark) stimulating the stomach into stronger action, in association of the viscus with the heart and arteries, and thus to prevent the torpor and debility of the sanguiferous system." (vid. Theory of Fever.) This doctrine is, in other words, that of restricting ourselves to the promotion of a vigorous excitement in the sanguiferous system, and to its depuration; thereby speedily to replace it in a condition to bear its necessary waste without any other advantage from specifics or tonics than what they can afford for good digestion and sanguification.

3. But a moderate and well-supported excitement of the arterial system, whether it be natural or artificial, will answer one or many curative indications. Why so? Because, as long as the excitement is continued, all depurative secretions are active; digestion gives new chyle and new blood, and the system is renovated. These happy effects are perhaps easily obtained in simple cases of intermittent; when, after a sufficiently energetic vomitive, good food and tonics may establish a natural excitement. Yet in long protracted fevers, this plan

would be insufficient. It is well known that in intermittents of an aggravated condition, reliance can no longer be placed on bark: but I am satisfied that either iron or mercury would create the necessary excitement, and promote their cure. The editors of the Dictionary of Medical Sciences relate the cure of an obstinate quartan of four years' duration in a gentleman of 30 years of age, by the use of copperas in the dose of 20, and afterwards 30 grains a day, although the subject had fallen into a state of horrid emaciation, and would absolutely refuse any of the most accredited febrifuges, yet, with the gradual excitement produced by the sulphate of iron, and by good nourishment, (being all over clothed in flannel,) he perfectly recovered in a few weeks' time. This remedy, by the by, is said to have failed in ordinary quotidians and tertians. In adducing it, I only wished to prove, that this or other preparations of iron have the property of creating a considerable excitement in the arteries, and exactly that kind of excitement which is the most effectual in the present kind of fever. Experience proves that the same can be obtained from mercury. Two cases are present to my recollection that were so far aggravated by the continuation of a tertian, that in both, bilious congestion in the liver, enlargement and induration of the spleen, had taken place. The first, the mother of several children, and for whom no medical care nor tonic medicines had been spared, was promptly cured by pills of submuriate of mercury, two or three grains a day, which more readily operated by procuring bilious discharges than by affecting the mouth. The second was still more complicated, by a long-standing catamenial suppression; she was aged 18 years, and had contracted a severe tertian in the town of Marietta, on the Ohio, where it is endemic, and often complicated with much malignity. There she lost both her parents. The fever left her from the change of air only; but she was much diseased on her arrival in New-York, where medical attention was only directed to her amenorrhœa. Presuming that she was dropsical, some drastic medicines were exhibited, which immediately brought on a violent paroxysm of her former tertian.

Another returned in two days; when, upon reflection, and being satisfied that she bore a tumefied spleen, and that her predominating diagnosis was that of long-standing intermittent, I gave her a few pills of calomel, which brought on so severe a ptyalism, that I was soon obliged to discontinue them. This was somewhat attended with an inflammatory and painful condition of the mouth, for which I bled her; but the mercurial excitement, with salivation, continued about ten days, and carried off both the tertian and the abdominal tumour; after which, a few emmenagogues restoring the catemenia, her cure proved complete.

It will be objected, that however ingenious our theory may be, as derived from the laws and functions of respiration, in its application to intermittent fevers, it falls short of furnishing any evidence in favour of the indications suggested for the treatment thereof, in preference given to any former doctrines and remedies: that nothing new indeed is offered at present; and that nothing but what by chance or by medical skill has been applied, during many ages, by ancient and modern physicians, who have not perceived, that with one or two pukes, good nourishment afterwards, and a few tonics, intermittents might be easily subdued: that a contrary result has been derived from their experience; and difficult of cure, and subject to relapses as they are, intermittent fevers, require a certain period of time for the disease to run through its regular stages, which remain indistinct and undefined; while nevertheless, a *specific* remedy is at last what cures them: that it is no matter how fortuitously and singularly the curative process has in many instances been obtained, because there is in this kind of fever a periodical nervous association, with a certain morbid state of the blood, which might bring on convulsions, but causes, in this form of disease, a paroxysm of fever, and a *specific* means removes it: that a *specific* remedy is therefore wanted; and the best we possess, is the Peruvian bark itself.

I have thus stated an objection in its full force, which I have

frequently made to myself; but although it appears plausible, it will not easily establish the assumed ground of preference for the old doctrines against our present theory. There is a great difficulty in the way. When it is a question of a periodical disease, we must not pretend to decide which is the best and most effectual remedy, unless our mode of treatment admits as a condition, and a necessary one too, some rules *in relation to time* for the exhibition of medicines, especially in this, which is periodical, and very versatile in the march of its paroxysms. It is well understood that Peruvian bark must be administered in the interval of apyrexia. This is admitted in practice; yet, as far as it goes, Peruvian bark fails, and often must be given up; oftener is succeeded by relapses; remaining, therefore, an uncertain and dubious antidote. Now, let us take an impartial view of the general mode of managing those fevers.

Is it not true, that little attention or none at all in point of time, is given or thought necessary in the treatment of intermittent fevers?—that physicians prescribe the same remedies, whether it be a quotidian, a tertian, or a quartan? Is it not true that, visiting their patients in the *day-time*, they seldom or never think to appropriate the *night* for the observation of paroxysms, or for the use of medicaments? Is it not, however, evident, that a quotidian cannot afford a longer period than 6 or 8 hours; a tertian more than 12 or 14; a quartan, 24 or 36; and that, according to a recurrence of fever in the morning, noon, or in the evening, it becomes necessary to invert the usual order of meals, of taking medicines, and of rest? What physician has yet thought it indispensable, or rather has not found it ridiculous, to apply, during the night only if necessary, the prescription which he has given at noon-day? Such should, however, be the case in correct practice, so that the virtues of remedies may not be thrown away, nor the strength of the patient necessarily wasted. One of the most striking cures of a lingering tertian I have witnessed, was that of a lad, of about 17 years of age, who had been kept under medical treatment and

regimen. Impelled by great hunger, he got up during the night, to search for something to eat. He found and ate up voraciously, a quantity of boiled peas, which happened to be of the most nourishing kind (the *cicer*, in the Linnæan class of diadelphia). He returned to his bed, where he happily slept away his distressing disease, and thus perfectly recovered. Let all these practical cautions in intermittent fevers be adopted and attended to. I hope it will be found that a similar mode of treatment is more effectual than hitherto supposed, and that the doctrine of specifics is absolutely delusive.

Be this as it may, the complaint under consideration lies in our books like an opprobrium medicorum, for there is no system nor determined theory in relation to its causes, or diagnostics. All that we know of it, remains still subject to controversy or opposition, and our patients in intermittent fever, are always more under popular management than medical; and after we have prescribed Peruvian bark, or some new substitute, as a supposed *specific*, the public have nothing more to expect from us; yet our materia medica testifies our diligence and researches after remedies. The Americans have particularly added many precious vegetable substances, especially the *Liriodendron Tulipifera*, the *Prunus Virginiana*, the *Cusparia Febrifuga*, the *Quassia Excelsa*, &c. We have poisons also, the *Strychnos*, *Faba St. Ignatii*, the arsenical drops of Fowler, as a pre-eminent febrifuge, and the opium from high medical authority. In fine, and as an American remedy somewhat under patronage, the *spider's cobweb* should not be forgotten. The sulphate of quinine at present seems to hold among us an undisputed ground and pre-eminence. It will not, however, discredit the very numerous popular remedies which, although frequently rejected by physicians, are still supported by recent or known instances of cure. These are too numerous to detail. Suffice it to say, that they embrace a great variety of roots and substances of all kinds; and that not unfrequently they extend to magic and incantations. A singular deception

of the kind, and a very operative one, I must be permitted to mention. A French brass-founder once got into great repute for curing intermittent fever with a kind of *enchanted* or *miraculous brass cup*, on which many symbolic and cabalistic figures were engraved. This he hired, at a great price, for the following prescription:—It was to be filled up with hot wine, which, when cool, was to be drank so many times a day. It usually excited some vomiting or colic; but it cured the patient, probably as a *gentle poisonous dose of verdigris* and oxide of zinc!

The present state of medical theory and practice with respect to intermittent fever, may therefore, I humbly hope, be my apology for offering some rational and philosophical disquisitions on the subject.

Art. III. Case *of* Osteo-Sarcoma *of the* Superior Maxillary Bone, *with the operation for its removal.* By David L. Rogers, M. D. of New-York.

As the attention of surgeons of late has been directed to the diseases of the face, and more particularly to the ossific tumours of this part, it is important that every fact should be given to the public which may have a tendency to elucidate the character of this disease, or to confirm the utility of those splendid operations lately performed in cases of this kind by Professor Mott. For in the result alone can their importance be established; and, like all innovations in practice, they must, for a time, contend with the prejudices of professional men, which, however, will gradually yield as success becomes more certain.

The favourable result of Dr. Mott's operations on the lower jaw, for the cure of osteo-sarcoma, led me to the belief that the disease might be cured in any situation, provided the morbid parts could be completely removed. It is considered a local, rather than a constitutional affection, as

most of the cases which have been published evidently prove. They were generally submitted to strict medical treatment, but without receiving the least benefit, and a resort to the knife rescued them from death.

With the firmest confidence in the utility and success of a surgical operation, I was induced to attempt the extirpation of the disease from the *upper jaw*, in the following case.

R. G., born in Ireland, aged 34 years, came under my care about the first of May, 1824, for an affection of his nose. His constitution was much injured by previous intemperance and hard labour. He stated, that the affection of his nose was of six weeks standing. The disease first made its appearance by an enlargement of the soft parts in the front of the mouth, and a loss of all the incisores teeth. His nose soon became obstructed, and a body of a fungus character made its appearance in the right nostril, pressing upon the septum, and gradually obstructing the passage of air through the nose. The disease had progressed thus far, at the time of my seeing him, without much pain, but with surprising rapidity, and was then making its way through the palate.

The malignant character of the disease, and its rapid progress, almost prohibited any attempt, with the least prospect of giving the patient relief. It being evident that unless some energetic measures were adopted to arrest its progress, it must soon terminate his existence, I therefore determined, with the approbation of Dr. Mott, to attempt its extirpation.

The operation was accordingly performed on the tenth, in the following manner. An incision was made first through the filtrum of the upper lip, which was dissected from the tumour and alæ of the nose, so as to turn both portions of the lip over upon the cheek. The second incision was to detach the cartilaginous portion of the septum narium from the top of the tumour. After extracting the first molar tooth on each side, a fine saw was used, which readily divided the superior maxillary bone, including the palatine process, the two incisions meeting at the palatine suture: after sawing through the principal bones, the tumour was easily removed,

although it extended much farther back than was at first anticipated. It was found necessary, during the operation, to remove the two inferior turbinated bones, a part of the septum narium, the vomer, and a part of the right antrum.

Only a small quantity of blood was lost during the operation considering the extent of the disease, and the vascularity of the part: this may be attributed to the frequent use of the saw. After the operation, the soft parts were brought together, and secured by three sutures and adhesive straps. No unpleasant symptoms occurred during his recovery. The parts adhered by the first intention. There was considerable falling in of the upper lip, in consequence of the support which it gave to the nose. In two weeks from the time of the operation, the patient was able to walk out, and on the fourth, to return to his daily labour. The situation of this man will be rendered comparatively very comfortable with the assistance of a cork palate.

ART. IV. CASE *of Poisoning by* TINCTURE *of* OPIUM, *successfully managed by Terebinthinates.* By FREDERICK W. JENKINS, M. D. of New-York.

IN explanation of my reasons for using the Ol. Terebinthinæ in the following case, I would state, that it was my fortune, whilst pursuing my studies in this city, under an eminently distinguished teacher and practitioner, to be present at a case of poisoning by laudanum, in which that gentleman's best exertions were unsuccessful in effecting a recovery.

Struck with this fatal result, and determined, if possible, to fix upon some agent, whose energies could be confidently relied upon in such dreadful emergencies, it appeared to me that the oil of turpentine presented claims entitled to paramount attention. It is known to be a diffusible stimulant of the most potent kind; a cathartic, whose certainty and activity of ope-

ration are almost unrivalled. In this article, therefore, were combined, qualities which peculiarly adapted it for preference in the circumstances alluded to. Its stimulant properties, it appeared to me, were calculated to rouse the system from the state of torpor which follows the ingestion of an inordinate quantity of opium, and its actively purgative powers to deterge the bowels of their noxious contents, and to prove a counter-irritant of the most valuable description. This theory thus settled in my mind, I had fully resolved, in the first instance that could not be controlled by the ordinary remedies, to see whether the practice deduced from it would not be salutary. The following case realized my most sanguine expectations.

Early on the morning of the 2d September, I was requested to attend on Mrs. M'A——, who was stated to have taken a large portion of laudanum the evening previous. Not prepared to obey the summons immediately, I sent by the person who came for me, the ordinary emetic of ipecac. and tart. of antimony, with directions for its being given as soon as possible. On my arrival, I found the situation of the patient as follows: countenance cadaverous, mouth and eyes half closed; extremities nearly cold, and very little warmth on the surface generally; pulse scarcely to be felt; presenting, in a word, all the appearances of approaching death. From her friends I ascertained that she had taken to the amount of between two and three ounces. A medical man who had been called in, ordered *nitrate of potash* to be given. This, as might reasonably be expected, produced no other effect than considerable excoriation, and an excessive tenderness of the mouth and fauces. He then withdrew, declaring the case to be hopeless. About 12 o'clock that night, a physician of the highest eminence was sent for. He succeeded in getting down a solution of the sulp. cupri: this excited some degree of vomiting, but the matter ejected was wholly unmixed with laudanum. Such, I understood, was the history of the case.

Finding that the powder I had sent had been thrown up shortly after being taken, and that another of the same de-

scription, which I now gave her, shared the same fate, both bringing away nothing but a watery fluid, having neither the appearance nor smell of laudanum, I endeavoured to administer a table spoonful of a strong solution of sulphate of zinc. The excessive sensibility of the month would hardly allow of its being passed beyond the verge of the lips. Remembering then the expedient resorted to by Dr. Chapman in similar circumstances,* I ordered an injection of a drachm of tartrite of antimony dissolved in water. After waiting some time, and finding that this, although retained, produced no effect, I now resolved to exhibit the turpentine, both by the mouth and anus. The following mixture was accordingly immediately thrown up:

℞ Ol. Tereb. Rectif. . . ℥i.
Vitel. Ovi . . . . . No. 1, M.
Deinde adde Aq. Pluv. Tepid. . ℥viii.

This, after being retained some minutes, was rendered, bringing with it a slight tinge of fæcal matter. Obliged to leave my patient, I gave directions to have the enema repeated in about thirty minutes, and for her to take, every quarter of an hour, three teaspoonsful of the following:

℞ Ol. Tereb. Rectif. . . . ℥ij.
Ol. Ricini . . . . . ℥j M.

12 M.—An evident improvement had taken place. Her lips and countenance had in some measure lost their ghastly hue; a degree of warmth had returned to the extremities and surface in general; pulsations at the wrist distinctly to be felt; no catharsis had, however, yet taken place. Ordered a soap injection, and to continue the terebinthinate mixture.

6 P. M.—To my utter astonishment, found the patient sit-

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* "After having unavailingly tried a series of the most active emetics, I directed that half a drachm of tartarised antimony, dissolved in a little water, should be thrown up the rectum; and, as I anticipated, a violent cholera morbus ensued, evacuating the entire alimentary canal, so much so indeed, that the food undigested came by stool."—*Therapeutics*, vol. I. p. 158.

ting up out of bed, and able at times to converse with her friends. Her system, however, was visibly much exhausted, and her ideas were rather wandering. Was informed, that shortly after my last visit, an active purging had taken place; dark and offensive matter had been discharged; and that the amendment, so surprising to all who were present, had then developed itself. Complains of much soreness of mouth and fauces.

Sept. 3d, 11 A. M.—Dr. Francis was so kind as to accompany me to see the patient. We found that the narcotic influence of the opium had entirely passed away, and that her mental faculties had resumed their full dominion. Soreness of the fauces still continues, with indistinctness of articulation, and some difficulty of respiration. An epispastic was applied to the chest, and she was ordered demulcents.

Sept. 4th.—Laryngitis has supervened. An emetic being given, had a most signal effect in repressing the attack. A blister, with small doses of ipecacuanha and calomel, have rendered her recovery no longer a subject of doubt.

ART. V. *Additional Remarks on the* EUPHORBIA HYPERICIFOLIA. By WILLIAM ZOLLICKOFFER, M. D. of Maryland; in a letter to the Hon. Samuel L. Mitchill, M. D. LL. D. and Professor of Materia Medica and Botany in the University of New-York, &c.

WHEN I transmitted to you a former communication* on the *Euphorbia Hypericifolia*, more particularly in relation to its remedial application in *dysentery* and *diarrhœa*, no case had presented itself to my professional consideration, approximating to *cholera infantum*, which afforded me an opportunity of testing its efficacy. Since that period several patients, labouring un-

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* New-York Medical and Physical Journal, No. IX.

der this distressing, and not unfrequently unmanageable malady, have claimed my attention. In each of these cases, with the exception of one, in which I prescribed this invaluable indigenous vegetable production, I am happy to say that I was not disappointed in viewing its salutary effects.

In the treatment of the disease under consideration, I would have it understood, that I am in the habit of directing its internal exhibition under certain circumstances only, in which narcotic and astringent remedies would not appear to be contra-indicated. In the first stage of the disease, when the inflammatory or febrile excitement is such as to render the adoption of the antiphlogistic means in a greater or less degree advisable, my attention is generally directed to the use of small and repeated doses of *calomel*, with a view not only of removing from the alimentary canal the vitiated secretions that too frequently appear to be present, but likewise to subdue the increased and irregular arterial action; and also to quiet, compose, and tranquilize that deranged excitement in the hepatic system, which may be considered a symptomatic affection, and which, if not corrected, must in the end be calculated to act as an additional source of aggravation, and consequently render the application of the most useful and efficacious remedies the more ineffectual.

The ol. ricini I sometimes direct to be taken, both alone and in conjunction with calomel; but never, unless the discharges from the bowels are more or less sanguineous; under which circumstance I conceive it admirably adapted, in addition to the cathartic effect it produces, to sheathe the mucous coat of the bowels, by obtunding the action of the vitiated secretions, that would, in this stage of the disease, most certainly be productive of much increased pain and uneasiness.

In the secondary stage of this affection, where I have reason to apprehend an inflammation of the intestinal tube, I not unfrequently direct the application of an epispastic over the abdominal region, with a view of relieving and removing the local inflammation, and likewise of rousing up the nervous energy, and consequently producing a contrary impression to that

that has been induced by the operative influence of the predisposing and exciting causes of the disease.

Various other remedies I am in the habit of using, with the intention of breaking up the general febrile excitement, of correcting the state of the bowels, and of restoring the liver to the healthy performance of its destined functions. In the use of these, I am, however, always governed by the constitution, nature, and state of the disease, and the necessary concomitant circumstances that should be invariably taken into view, previous to any conclusion being adopted in relation to the plan that should be pursued in the successful management of diseases generally.

When I have found the adoption of the plan that I have just pointed out ineffectual, and incompetent to the removal of *cholera infantum*, which in more than two-thirds of my patients has been the case, I have, from the circumstance of its having generally removed, in a considerable degree, the increased excitement connected with the first stage of the disease, been enabled to place those that have been committed to my care, in that situation in which narcotic and astringent remedies would not only be considered admissible, but essentially necessary. In this situation, I have directed a small tea spoonful of the infusion of the euphorbia hypericifolia, directed in the third volume, pages 33–36, of the New-York Medical and Physical Journal, to be taken every three hours, until its salutary effects became evident, when the dose was to be given less frequently. With this article I can safely say, that the little sufferers shortly began to revive and become cheerful, and exhibit to their attendants a favourable termination of their malady. I have never given it a trial in the primary state of the disease, supposing the system not to be in a proper state for its successful administration. When I have, however, been called to see a case that had been affected for several days, in which much debility was present, I have prescribed it without preceding its use by other remedies, and that with equally decided

succes

To conclude: I am exceedingly happy that I have it in my power to present the medical profession with a plant possessing such remediate virtues, as to render it, perhaps, one of the most useful and efficacious medicines with which the materia medica acquaints us, in the treatmeat of a disease which not unfrequently excites the sympathy of the attentive, the intelligent, and the successful practitioner. And I would hope, that such as may have an opportunity of testing its utility. would give it a few trials, in order to satisfy themselves of the virtues that have been ascribed to it, and consequently acquaint themselves of its decided usefulness over, I may add, every other remedy.

ART. VI. OBSERVATIONS *and Experiments on the Medicinal and Poisonous properties of the* MANCINELLA TREE. By J. B. RICORD MADIANNA, M. D. Read before the Lyceum of Natural History of New-York, April 1824.

THE family of the tithymaloideæ is one which offers great interest to the toxicologist, both in order to ascertain the real effects upon the animal economy of the poison contained in the greatest part of the 33 genera of which it is composed, and also to combat a great number of errors propagated and perpetuated to the present day, by passing from one book to another, as the *book-makers* thought proper to establish their borrowed erudition to the prejudice of truth. Nature, aided by science, has seldom been consulted on this subject. Men who abandon their homes to seek fortune in foreign climes, are, with very few exceptions, rarely competent to aid the progress of science; money almost exclusively occupies their attention; and should there be found among them one who makes nature his study, he draws upon himself public ridicule, and, to avoid the sneer of criticism, is sometimes forced to abandon his researches, particularly if they clash with inte-

rest. Such must ever be the case with the philosophical physician, who is too often censured for giving even a very trifling portion of time to the study of nature. This time, though so preciously employed, appears in the eye of ignorance to be robbed from that due to the sick. This unfortunate prejudice against those sciences whose progress requires something more than a study of books, will last as long as the knowledge of the humble philosopher shall be a source of humiliation to rich ignorance, or as long as flattering fools shall be its echo.

But let me now proceed to the abridged account of my remarks and experiments on some of the tithymaloideæ, and permit me to reserve all botanical, descriptive, or chemical analyses for my toxicology,* not intending to render my paper too lengthy, nor intrude too much upon your time. For these reasons, I shall give as few experiments as possible, reserving by far the greater part for my future work.

The mancinella tree,† hippomane mancinella. *Lin.*
Monœcia monadelphia. *Lin.*
Of the family of the Titymaloides of Ventenat.
Euphobes of Jussieux.

There are few naturalists who do not know that the mancinella is a large tree which grows on the sea-shore, in almost all parts of the Antilles, and on the continent of South America. I have seen some trees so near the sea as to have their roots bathed with its waves, and others at a considerable distance from the shore. I have measured some more than ten

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* It is the intention of the author of this paper to publish hereafter, a general work on the Toxicology of the Antilles.

† Mançanillo, from the Spanish word mançan, an apple.—(*A Voyage to South America, by A de Ulloa.*)

Hippomane, from the two Greek words, *horse* and *fury*.

Some take it to signify the secundines of a mare; also, the fleshy substance which sometimes adheres to the forehead of a new foalded colt is thus named.—*Motherby's Med. Dictionary.*

feet in circumference, and fifty in height. Its wood is hard, compact, and sometimes used by the cabinet-maker. Before the negroes begin to cut a mancinella tree, they light a large fire around it, and by this means dry up all its sap, and prevent the venomous vapours which it exhales from affecting those employed in working.

The fruit of the mancinella resembles in form and size that species of apple called pomme d'api, (mala apiosa et milerosa. math. m. Sativa. Tournef.) though in colour somewhat different, being of a yellowish green. These apples, which send from the tree a delightful perfume, fall from it in great numbers, and dry on the ground, though sheltered from the rays of the sun, and what is remarkable, they never rot. This fruit, when ripe, is soft and spongy, and when tasted seems at first quite insipid, but leaves in the mouth a sharp and caustic taste. This is a fact of which I assured myself at my own expense: for one day, anxious to become acquainted with the taste of th s poisonous, but beautiful and fragrant fruit, I could no longer resist the temptation, and chewed one. (This was, I recollect, March 3d, 1822.) It appeared at first nearly tasteless, but I was soon undeceived, for this insipidity in two minutes gave place to a pricking and burning heat almost insupportable. I at first had recourse to cold water, which I held in my mouth, and changed very often, to lessen my suffering; the burning sensation continued increasing for some minutes, when a copious salivation began, and appeased my pain.

I went immediately to bed, (for it was evening when I gratified my strange fancy of tasting this forbidden fruit,) and passed a bad night, with some fever. In the morning, the inside of my lips and the end of my tongue were covered with small pimples, and a blister which was formed on my palate gave me much pain and difficulty in swallowing. My mouth was much inflamed all day, and a multitude of pimples broke out on my chin. The following night was again a restless one; but by degrees these unpleasant effects wore off,

and on the sixth there only remained some slight traces of my experiment, which I firmly resolved not to repeat.

The mancinella apple may, however, be touched, whether green or ripe, without producing any eruption on the skin. I have frequently carried these fruits in my pocket, where, becoming bruised and mashed, I have, without being incommoded, withdrawn the pulp with my fingers. During the seven years of my residence in Guadaloupe, where I had an extensive practice as a physician, I never heard of a person poisoned by eating the mancinella apple. This is probably owing to its unpleasant taste, and it is difficult to conceive how the Piedmontese soldier, of whom M. Orfila makes mention, could have eaten two dozen of these apples without being disgusted by their insipidity, or deterred by the burning heat which must have pervaded his mouth after some minutes; it may be supposed that he was starved, and eat with great voracity. The following is the account, as related by the learned Orfila.—" A Piedmontese soldier," says he, " taken prisoner at the siege of Belgrade, was carried a slave into Turkey. One day, when walking on the sea-shore, he perceived on the ground a number of fruits, which he took for apples; he eat about two dozen, and filling his pockets, returned home, continuing to eat by the way. In about an hour his abdomen became tumified, and he felt an intolerable burning in his bowels. These symptoms augmenting, his lips became ulcerated by the milky juice of the fruit, and his body was covered with a cold sweat. He drank copiously of a decoction made of the leaves of a ricinus, (avellana purgativa,) which completely emptied his stomach and bowels; and all his bad symptoms by degrees disappeared. Rice was then administered to him, and in the space of twenty-four hours he suffered no more pain, and the swelling of the abdomen was singularly diminished," &c. From my experiments on animals, I am much inclined to believe, that eating more than a dozen mancinella apples in Guadaloupe would draw much worse consequences upon any person so imprudent. And besides, what a vast difference is there between this case of the Pied-

montese soldier and the assertion made by Ulloa,* who says, "Upon tasting the mancinella apple, the body immediately swells, till the violence of the poison, wanting sufficient room, bursts it; as has been too fully confirmed by several melancholy instances of European sailors who have been sent on shore to cut wood," &c. But the assertions of travellers, when not confirmed by their own experience, are rarely to be credited.

Here follow some experiments, extracted from a great number found in my manuscript.

First Experiment.

May 16th, 1821, at 10 o'clock in the morning, I took a mancinella apple recently gathered, and mashing the pulp, gave it to a small dog. At 11 o'clock his abdomen was much swelled, and he lay down, appearing to suffer much pain. At 12, he had a natural evacuation; 3 o'clock he had two more, of a whitish colour, and in which appeared pieces of the apple undigested.† At 5 o'clock, the abdomen was still much distended, the animal very weak, and appearing meagre. He remained very ill all the afternoon, till eight o'clock in the evening, when he grew better, and ate a small piece of bread; he had no more evacuations. The 17th he was somewhat weak, but had a good appetite, and in two days was perfectly well.

Second Experiment.

I gathered some mancinella apples, perfectly ripe, and dried them in the shade. I cut twenty grains in small pieces, and gave them to a middling sized dog. This appeared to have no effect until three hours after, when I observed him evacuate great quantities of urine, and as frequently as three times in ten minutes. He had no other evacuation, but appeared to

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* Don Antonio Ulloa's Voyage to South America, vol. I. p. 49. London.

† In the second stool there was a tænia of three inches long.

experience great weakness in *the loins* when walking, which lasted three or four hours. These effects, however, soon disappeared. This experiment gave rise to the idea in my mind, that this fruit dried might possibly be a powerful diuretic; and I repeated it upon several other days, giving doses of 20, 30, and 40 grains, and have always found the same result; the fruit thus dried appearing not otherwise to incommode the animal.

Third Experiment.

Feb. 12th, 1822. I pounded eight mancinella apples, and gave them to a young female dog, very strong and lively, exactly at noon. In a quarter of an hour she had a universal trembling in all her limbs, with convulsive motions. At one o'clock, she vomited a considerable quantity of foamy glair, after which she howled, and endeavoured to disengage herself from the cord which held her, appearing to suffer very acute pain. The abdomen then began to swell, and at two o'clock she vomited again very copiously; a great part of the apples was then expelled from her stomach, with a quantity of foam. The left *parotid* gland was much enlarged, and the animal grew weak. At half past three, she had a natural evacuation; her abdomen, however, was very much distended, and she appeared, from the relaxation of all the muscles, to be much fallen away. At four, she vomited again, but could no longer stand, so extreme was her weakness. At six o'clock, she was dying, motionless, and cold, with fixed eye, and breathing scarce perceptible. At half past eight, she died without convulsions or groaning, her limbs remaining supple.

Appearances on Dissection.

The head: the arachnoid membrane very much injected with blood, and some serum found at the base of the cranium.

The right lung much inflamed, and covered with black spots; the left slightly inflamed.

Heart: the right auricle distended with clots of black blood; the left empty. The right ventricle full of clots of black blood; the left empty.

The diaphragm very red and inflamed.

The liver somewhat larger than natural.

The gall-bladder filled with yellowish thick bile.

The stomach not much distended, its mucous membranes inflamed, red, and covered with black spots, separating easily.

The intestines much inflamed, with fetid air, and a great quantity of mucosity, and also filled with small black spots.

The kidneys more than twice the natural size.

The womb exhibited nothing remarkable.

From the preceding experiments, and a variety of others which I shall not give here, I have been fully convinced of the diuretic effects of mancinella apples, either freshly gathered or dried; but that this fruit will ever find a place in the materia medica, I consider very doubtful.

Father Labat tells us, in the history of his voyages to the Antilles, that "the white crabs or land crabs (*ocypoda pugilator*) are often poisonous; because, living on the sea-shore, they often find the apples and leaves of the mancinella, which they eat without injuring themselves much, but that the crabs thus nourished are very hurtful to those who eat them." This is what Father Labat had been told by the Creoles of his time, and he repeated it, as is practised by most travellers, from hearsay. The naturalist Jacquin, however, assures us, that crabs do not eat the fruit of the mancinella; and notwithstanding this assertion, many planters are still in the old error of Father Labat. Wishing to assure myself of this fact, I determined to take experience for my guide to lead me to the truth; and in July 1821, being the season when crabs are in great plenty, I took two (a male and a female) and put them in an iron cage, where I nourished them four days with the fruit of the apricot of the Antilles, (Mamea-Americana,) and with *curage* (commelina zanonica). They fed well all this time, and seemed perfectly healthy. A few days after, I withdrew from their cage all their food, and put in its stead two ripe mancinella apples; the two following days these apples remained untouched, when in order to be certain of the fact, I

substituted their usual food in place of the fruit; they eat a whole day with avidity. The following day, I gave them nothing but the ripe apples, which remained untouched by them until they died. This experiment, executed with great care, and several times repeated, proved that crabs do not feed upon the mancinella and rather than touch this pernicious fruit, actually perish with hunger.

It is probable that the ill effects sometimes produced from eating these crabs, may proceed from indigestion or cholera morbus, to which persons of certain idiosyncrasy are subject.

" Nor is this most poisonous of all plants without its medical use; for, by an easy and simple operation, its juice in the state of vapour extirpates those troublesome and obstinate fungi, the sequelæ of the yaws, called crabs and tubboes. The operation is this: a hole large enough being dug in the sand, alternate layers of charcoal and mancinella apple are laid in it. When the charcoal is well lighted, and a thick smoke arises, the patient is made to place the diseased foot over it; and a piece of thick osnaburgh is laid over all, to prevent the escape of the vapour. At the end of an hour the foot is removed, and the crabs, which before the application of the steam were hard and untractable, are now completely rotten, insomuch that without giving the least pain, they are picked out with a small-pointed knife."

This I have not ascertained by my own experience, but hope to have soon an opportunity of doing so, in my intended voyage to Guiana.

Though the mancinella tree be an object of terror to man, it is not entirely forsaken by animals. I have seen the black-bellied humming-bird (polytmus holosericeus, *Lin.*), the red-breasted humming-bird (trochilus auratus, *Lin.*), and others, feed on the spiders* which had extended their webs upon its

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* I have ascertained beyond all doubt, with the aid of a microscope, in examining the stomach of a great number of humming-birds here mentioned, that, independently of their sucking the sweet juice of flowers, they also feed upon small spiders and other insects.

leaves and branches, and the anolis (lacertus minor levis. Sloan.) watching motionless upon its trunk to prey upon the insects found there. Having heard it remarked by persons in Guadaloupe, that goats eat both the leaves and fruit of the mancinella, I tested this also by experience, which proved to me the contrary. Dr. Barton, of Philadelphia, tells us that horses and cows may eat with impunity the leaves of the rhus radicans. According to Thunberg, sheep eat the leaves of the rhus lucidum without being incommoded. And William Bartram assures us that horses are very fond of the leaves of the rhus toxicodendron. All these trees are as certainly venomous as the mancinella; still I know not that any quadruped could eat the leaves of this last without being poisoned. I discovered, however, one creature who made them its nourishment; so true it is that the earth produces nothing which does not participate in the reproduction of the animals which people it. The leaf of the mancinella nourishes a caterpillar, which, when arrived to its perfect state, measures only eight lines. This larva is at first of a pale green colour, but as it increases in size, and when about changing to a chrysalis, it becomes of a yellowish colour; its head very small and shining, and of the same colour with its body. With the naked eye no hair is observable on its body; but examined with the lens, some scattered ones are seen on each side, distant from each other. On the middle of the back, a very thin longitudinal line, of a brown colour, is apparent. It has six scaly feet, eight membranaceous, and two posterior; is extremely lively in its motions, and very voracious; whole branches of the mancinella are stripped of their leaves, so great is sometimes the number that live upon it. And it is remarkable, that in order to protect itself from the sea breeze and the fly-catcher, this caterpillar skilfully glues another leaf upon the one of which it devours the parenchim, leaving the membranous fibres almost untouched. But it is curious to observe this insect when about changing into a chrysalis: it then encloses itself in a leaf intended for its dwelling; for this purpose it places itself at the end of the leaf, where it fastens a thread, which, like that of the spider, pro-

ceeds from its mouth, and carrying it alternately from side to side, closes the leaf hermetically by drawing it together; this leaf is folded in such a way, that the upper side forms the interior of the lodging; and reaching that part of the leaf where the stem commences, the little animal, not being able to bring the sides exactly together, constructs a very firm web, which completely shuts up the opening. Having examined a great number of leaves thus folded, I have often found the caterpillar in a state more or less advanced of metamorphosis. Some were empty, and then the hole by which the insect had left its habitation was perceptible.

The chrysalis is 4 lines in length, of a beautiful orange colour, and besides being so well shut up in the leaf, it is also enclosed in a silvery white egg; which double precaution is doubtless to preserve it from the injuries of the weather, as well as from the ants. The larva of the mancinella, which I nourished in a glass vase, remained in a chrysalis state fourteen days, and came out a beautiful *noctua*, measuring 3 lines from the head to the extremity of the wings, which, in a state of repose are closely united, entirely covering the body, and form a sort of cylinder. When thus folded, a transversal line was perceived at their base, and in the middle two truncated cones, whose bases were towards the head of the insect. These geometrical figures, of a brown colour, appeared on a ground of pale lilac, and produced a very pretty effect. This miller I have named Noctua Geometrica, and believe it has not been described by any naturalist.

Lamarck and Mirbel tell us, that "although the ill effects of the mancinella have been exaggerated, nevertheless it is probable that the neighbourhood of this tree may cause different diseases." It is the low and swampy grounds, impregnated by venomous miasma, where the mancinella grows, which is the real cause of diseases: such is my opinion.

Mr. Jacquin, without suffering any inconvenience, received upon his naked body the rain falling through the foliage of a mancinella tree. I have also found myself, during a shower, under the shade of a mancinella, and extending my hands pur-

posely to catch the drops of rain that fell from its branches, never experienced any ill effects. The inhabitants of Guadaloupe, however, carefully avoid a similar shelter during the rain, fearing that the drops falling from the tree, should occasion an extremely painful eruption on the skin. This I think only happens in those circumstances when there arises from different parts of the mancinella that extremely volatile and caustic venenous vapour, which, being absorbed by individuals susceptible of the eruption, are inevitably affected by it. For the leaves, or their juice, as I will show, produce but a trifling inflammation on the skin of delicate persons, and act only on the mucus membranes as a poison.

But whenever this volatile poison, which escapes from the tree, affects a person, an eruption and tumefaction supervenes, with more or less febrile action, according to the idiosyncrasies of the person affected. The blisters produced by this eruption break, a yellowish and thick fluid runs out, and an extremely painful sore is the result of this absorption.

One day, digging some roots of the mancinella tree for my experiments, I was completely affected by the volatile poison which at that time had saturated the atmosphere around the tree.* I at first felt a heat in my face, and afterwards a burning like that occasioned by the scorching of the fire. This was in the evening: I passed a restless night, and the next morning my face was swelled. I applied no remedy, and towards noon, a great number of little vesicles filled with yellowish water were formed on my face. In the course of two days these vesicles all disappeared, leaving a total disquamation. Having probably absorbed but a small portion of this volatile poison, the vesicles arising from it were scarcely larger than the head of a pin, for which reason they left no ulcers. During the course of the inflammation all the other symptoms were benign.

(*To be continued.*)

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* It is a fact, that a venenous atmosphere around the mancinella does not always exist. It was in this case produced by my work, viz. digging up the roots, from which I received in my face the first vapour exhaled from them as they were taken from the ground.

Art. VII. *On the medicinal properties of the* Acorus Calamus. By Edward G. Ludlow, M. D. of New-York.

Omnia orta occidunt et orta senescunt.—Sallust.

Fashion sways medicine as it does every thing else, and such is the ardour of the present age, that the discovery of new remedies appears to be only commensurate with that of new diseases. If in the exercise of this laudable zeal for progressive improvement, the practical results of the past were always retained, and its crudities alone rejected, we should not daily have to rescue from unmerited oblivion many medicines whose virtues have been tested by the experience of centuries.

Among those whose impending fate has elicited this remark is the Acorus Calamus, an indigenous plant of this country, whose medicinal powers are hardly noticed in any of our recent works on the materia medica. In Europe it is in high repute, and is correctly deemed one of the most efficacious of the vegetable stomachics.

In tracing its history, it appears to have been first noticed by travellers in China, as growing in pots in the houses of the affluent, being cultivated for its aromatic odour. It is, however, abundant in the Levant, throughout Europe, and this country. It is commonly known by the name of the sweet-scented flag, and grows in rivulets and marshy places. The root, which is the part employed in medicine, is crooked and full of joints, of a fragrant odour, and bitter pungent taste; the latter qualities improving when dried. According to Dr. Paris, "the principles in which its qualities reside appear to be an essential oil and bitter extractive, the root likewise contains fecula, which is copiously precipitated from its infusion by sub acetate and acetate of lead."

It was well known to both the Greeks and Arabians, and is thus noticed by Diascorides: "Calamus odoratus in India nascitur, melior est fulvus dense geniculata et qui assulose frangitur, plena araneorum fistula, albicans lentus in mandando, et astringens ac cum aliquanta acrimonia amarus."

Linnæus considers the names of odoratus and aromaticus as synonymous, being indiscriminately applied to the imported species, of which the acorus is a mere variety; in neither, however, has the astringent principle been detected, which is the only error in this otherwise accurate description.

It has been said to have cured intermittents when bark has failed, and is enumerated by Lind among the popular remedies in these diseases, as given in doses of ʒj nine mornings successively. Heberden also, speaking of intermittents, says, "I have given in some extraordinary cases ϑij of calamus aromaticus, and have found it more efficacious than a variety of other means which had been previously directed." That it is a valuable adjuvant to the cinchona in the cure of these diseases is very probable, although, like all other substitutes, it is far from being specific.

It was one of the principal ingredients in the once celebrated Theriaca and Mithridate, laboured compositions which are now justly excluded from our pharmacopœia.

In Constantinople, it is employed as a prophylactic against contagion.

The diseases in which I have used it are exclusively those of the chylopoietic viscera, as dyspepsia, diarrhœa, and cholera. Dyspeptic affections being dependent on debility in the nervous and muscular powers of the digestive organs, such medicines are indicated as increase their action and augment their tone; among these the vegetable tonics are chiefly relied on as affording in their infinite variety every necessary invigorating power.

For the removal of pain and flatulence in the bowels, which may be enumerated among the most frequent and distressing symptoms of the first stage of indigestion, calamus is superior to any other carminative; by virtue of its aroma it creates a strong sensation of warmth in the stomach, increasing its action without sensibly augmenting the force of the circulation, while its powerful bitter principle gives permanent tone to the relaxed state of the fibres.

In those cases where a sympathetic diarrhœa or looseness exists, dependent upon an irritability of the intestines, I have found the tincture of calamus produce immediate relief. I have in recollection a dyspeptic patient who is invariably seized with purging when exposed to a cold damp wind, and which obstinately resists the usual narcotic and aromatic prescriptions, and with whom this medicine is a specific. In idiopathic diarrhœa, especially in its chronic form, it is highly efficacious. Doctor Swediaur gave it in the form of extract, in doses of ʒfs. in dyspepsia, and speaks highly in its favour. It also allays bilious vomitings in cholera, and is eminently useful in removing the weakness which exists in the decline of the disease; it may be given in watery infusion, which partially extracts its virtues, though its best solvent is proof spirit, which, when the dried root is employed, affords an elegant tincture, of which the dose is ʒfs to ʒj.

Art. VIII. *Account of a Case of* Dropsy. By L. Ring, M. D. of Red-Hook, N. Y.

On the 17th of November, 1823, I was requested to visit Ann M——n, an unmarried female, aged 48 years, predisposed to phthisis, has a long neck, rather prominent shoulders, and contracted chest, fine clear skin, and delicate rosy complexion. She had been for about a year labouring under a complaint which was attended with dry hard cough, some enlargement of the abdomen, constipation of her bowels, pain in her right side, and scanty discharge of urine. The above symptoms, for some weeks previous to my seeing her, were increasing rapidly, and on my first visit I found her labouring under the following unpleasant symptoms: violent dry cough, pain and tumefaction in the right hypochondrium, her abdomen was a good deal swollen and tense, small but frequent pulse, dry skin, flushed countenance; but she experienced no chills, her respiration very little interrupted, her bowels were constipated, voided small quantity of urine, thirst considerable, her tongue not coated, her appetite was tolerably good, and she

had not for some time been regularly visited by the catamenial discharges.

From the above symptoms I was induced to consider her liver in a morbid state, her cough merely symptomatic, and that the disease would eventually terminate in a dropsy of the diffused kind, unless it was speedily checked. After ordering a cathartic, I put her under the use of calomel and scilla, of which three pills were to be taken in a day.

On the 22d, her system had become saturated with the calomel. Discovering no change in the symptoms, I ordered two pills a day to be continued with some simple diuretic, and an epispastic to be applied to her side.

The above plan was continued till the 6th December, and no visible change had taken place in her case. From this time to the 27th she took no medicine, wishing to trust her case to nature. Her disease during this interval increased very rapidly, her abdomen became greatly distended, her cough was more aggravating, the pain and tumefaction in her side were almost insupportable, she voided about a gill of urine in twenty-four hours, and her pulse was still small. I was aware that some more active plan must be adopted in her case, I therefore abstracted ℥xii of blood, which, from its having a thick sizy crust, convinced me of its propriety. The calomel and scilla were again ordered, and after taking twelve pills, her system again became saturated. Advised a continuance of two pills a day, and on the 3d January, ℥xii blood more were taken; pills continued.

7th. No change in her case; bled as above, and pills continued.

12th. She is much the same; bled as above, and pills continued.

20th. Cough somewhat abated; bled her ℥x. pills discontinued.

22d. She had an attack of dysenteric symptoms, attended with nausea, and discharge of blood by stool: she also experienced great prostration of strength. Ordered ℥j ol. ricini, with forty drops of laudanum, which removed the above symp-

toms. I considered the last attack indicative of a crisis having formed in the liver, and a favourable termination. Her cough, pain, and tumefaction of her side, now subsided; her pulse natural; no flush in her countenance; but her abdomen was still fully distended. I ordered her an emetic every second day for a week, which caused her to discharge freely from the stomach, and powerfully to evacuate from her bowels, but it had no apparent effect upon her disease, except that she had a return of the catamenial discharge.

January 30th. I now considered her case a proper one for the exhibition of digitalis, and she was accordingly directed to take Dr. Withering's infusion of digitalis, which was continued till the middle of February, without her experiencing the least benefit. It, however, produced a loss of appetite, and great prostration of strength. About this time her lower extremities began to swell, which in a few days increased to an enormous size.

February 15th. I at this time began to consider my patient in a very unpleasant situation, after having used so many powerful evacuants and diuretics without the least prospect of evacuating the effused water from the system. The abdominal muscles were distended to their utmost extent, the cellular substance of her limbs filled with water, she could not lie in a horizontal posture, she required large quantities of laudanum to give her temporary relief, her strength greatly exhausted, and her spirits very much depressed. Under these discouraging circumstances I commenced the following plan.—I made five punctures in each ancle with a common lancet, and directed a flannel bandage to be applied from the toes to the hips, and also a broad flannel bandage around the abdomen up to the lower part of the thorax. Then I gave the following pill in connexion with a strong decoction of the asclepias seriaca:

℞ Cantharis pulv. ℈fs.
Digitalis pulv. ℈j.
Sapo castel. ʒj.
M. ft. massa in pillulas xx dividenda, three of which were taken a day.

The discharge from the punctures was copious, and the pills, &c. produced an apparent effect upon the kidneys. This plan was continued till the 8th of March, when I expected she would bear the carbonas ferri in connexion with the pills; but her stomach rejected it. About this time the orifices at her ancles closed, and considerable excoriation took place, which produced troublesome ulcers; in other respects, no visible change had occurred. The same plan was continued till the 17th; when, about 2 o'clock P. M., a very alarming change suddenly took place; her extremities became cold; her pulsation ceased; her countenance was ghastly; her respiration was hurried and laborious, and she repeatedly expressed an anxious solicitude to be relieved from her miseries by death. At 8 P. M. her respiration became more laborious, her countenance more ghastly, her face cold and covered with sweat. I now expected that a few hours more would put an end to her agonies. Wine, with the compound spirits of lavender, was given, and she remained in this state of misery and suspense till the 19th, about 6 o'clock A. M., when her extremities became warm, her pulsation returned, and she took some nourishment. Her situation was now really deplorable; her abdomen was greatly distended, and the cellular substance from the feet upwards was filled with water, which rendered her perfectly helpless. The operation of paracentesis abdominis would have been immediately resorted to, but I was sensible that she was too weak to undergo the change that would take place by the discharge of the water. I again resorted to the pills as above, but increased the cantharis to one and a half grains, and added one grain of calomel to each pill. In a few days her gums became slightly affected; the calomel was then discontinued; her appetite now began to improve, and with it she gained in strength. From this time till the 14th of June, very little change was observed, except that she had improved so much in strength, that on that day, in the presence of two medical gentlemen, four gallons of water were evacuated by the operation of paracentesis abdominis; and all present were

astonished to see how she sustained the change that took place in her system by the loss of so much water. About two hours after the operation, she was seized with a sharp pain, which extended from the back to the breast; pulse small, but regular. I directed fifty drops of laudanum to be given, and to be repeated once an hour till relief was obtained. Two hundred and fifty drops were taken without having the least effect.

15th. Pain continued; she had voided between four and five quarts of urine during the preceding night, which removed the swelling from her limbs. A cathartic of sennæ fol. and sem. anis. was ordered, with an epispastic, if the pain should continue after its operation.

16th. Pain relieved by the epispastic; some cough succeeds the pain. She now commenced the use of carbonas ferri with digitalis. She bore the tonics well; her appetite improved, and with it she gained much in strength.

July 10th. She began to walk with the use of a cane; her evacuations were natural and regular.

21st. She rode about two miles, and felt invigorated by the ride.

23d. She rode about four miles, and felt much stronger and better. From this time she took proper exercise in riding, together with the chalybeates, and an improvement in her health was daily visible.

August 1st. I at present consider her out of all danger of a relapse; her lungs are perfectly sound, her cough has left her, and her pulse is really fine. She at present takes thirty grains of carbonas ferri in a day, without experiencing the least uneasiness, and her appetite is good.

25th. She is at present at Kingston, in Ulster county, visiting her friends, and enjoys remarkable health after so long and tedious a confinement.

Art. IX. Observations *on the efficacy of scruple doses of* Calomel *in* Dysentery. By Daniel L. M. Peixotto, M. D. of New-York.

There is, probably, no disease in which so many varied modes of treatment have been pursued, and with apparently equal degrees of success, as in dysentery. The bleeding, the emetic, the purgative, the sudorific, the tonic, the anodyne, and finally the mercurial plans, have all had their warm advocates, and been recommended on the strongest grounds of experience and of theory. To any one who has investigated the history of this disease, this inconsistency will not appear other than a seeming one. It was early observed by Sydenham to be a feature of dysentery, that it differs very much in the appearance of its symptoms in different years, and, as he supposed, according to the peculiar epidemic constitution of the air, and that it required corresponding changes in the treatment. Experience in later times serves to confirm the observation of this profound and acute physician. Many physicians, not adverting, however, to this change in the appearance of dysentery, have insisted upon some one form, which they have observed it to assume, as the only legitimate test of its presence. They have gone farther, and refused their sanction to any plan of treatment excepting that which they found appropriate to that peculiar form of the disease which fell under their own limited observation, and which served as the basis to their restricted theories on the subject. Hence young physicians, especially, have encountered difficulties of no ordinary nature, when they have been first called upon to manage this formidable disease. If they are biassed by any peculiar theory, and consequently restrict themselves to one method of treatment, it is indeed possible that a fortunate coincidence may render their views appropriate at the peculiar juncture they are called upon to act, but there is surely every probability that they may be wrong. If, on the other hand, they are not swayed by any one rule in

relation to treatment, they will find themselves at a loss, and probably commit extensive mischief, before a sufficient experience in the disease enables them to discover its true character and the indications which it presents. Nor is this uncertainty confined to young physicians only. Older men, however experienced, cannot immediately ascertain what is the character of a prevailing epidemic, nor what means will be required for its treatment, and they will be fortunate if, like Sydenham, they lose only a few patients before they arrive at a satisfactory and safe conclusion.

From all this, it will appear evident that the theories which have in general been entertained in relation to dysentery, have been too exclusive, and not based upon experience as ample and extensive as the subject admitted and required. Of late years, a great improvement has indeed taken place, and the labours of the East India physicians, and of none more than Dr. James Johnson, the able author of the treatise on tropical climates, have thrown the most satisfactory light upon this subject. The theory adopted by this gentleman, more especially, leads to indications, which, it appears to me, can be applied with success " in almost every case and every climate." The disturbance in the functions of the skin and of the liver, the broken balance of the circulation and the excitability, the consequent plethora in the cœliac and mesenteric circles, and finally, the perspiration being stopped, a vicarious discharge of mucus and acrid serum upon the intestines are sufficient to account for every symptom of dysentery, under whatever form it may appear. This view of the subject is recommended too, by the advantages it offers of combining, if necessary, all the other modes of treating the disease. It is certainly not shackled with restrictions, and this circumstance alone speaks volumes in its favour. It has not, however, been passed by without opposition. The excessive use of mercury it inculcates, has been decried against with particular vehemence, and by none more so, than by those who have been least qualified by experience to advocate or oppose any system whatever. Some have gone so far as to assert, that where

mercury in this disease does no harm, it is because it passes through the bowels unchanged!* Others, less dogmatical, have nevertheless rejected this doctrine, and the practice it inculcated, as inapplicable to any climate excepting that of the East Indies.† There is, however, sufficient proof at present before the medical public, that this theory and practice have been found no less useful in their application to the dysentery of the western hemisphere, than to that of the east. Nor has the test of its usefulness been confined to tropical climates. By the reports of Dr. Cheyne on the dysentery of Ireland, it appears that the East India practice of treating this disease by scruple doses of calomel, has been found highly serviceable in arresting this disorder in that country, where it has been, for ages past, known to prevail with peculiar malignity.‡ During the late war, it was employed with eminent success on the New Orleans station, by Dr. Archibald Robertson, of the British army.§ It appears, therefore, to have deserved more attention from the physicians of this country than it has as yet received.

Having had some experience in this disease, both in the West Indies and in this city, I have thought it would not be uninteresting to state the result of it, as it goes in a great measure to confirm the remarks already made. When I first went out to the tropics, I was impressed with a belief that idiopathic dysentery was a contagious fever of a typhoid character, in which the greatest evil to be apprehended, in a warm climate especially, was the tendency to putrescency. Depletion, therefore, was not to be used without the greatest caution, and the most powerful means to be resorted to were sudorifics. A few cases, however, sufficed to show me that no theory could be more erroneous than that which considered this as a disease of debility, and that no practice was more tedious and inert, than that which was founded on this view of the disease. Dysentery was indeed combined in some cases with typhus

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* Hamilton on the abuse of Mercury.

† Thomas's Practice, &c.

‡ By Sydenham it was called one of the *leaguer* diseases of that country.

§ Johnson on Tropical Climates, vol. II.

fever; but even here it was a disease of depression, not of debility, and antiseptics and alexipharmics were sure to do harm. One of the first cases of pure dysentery which fell under my observation, was, I have reason to fear, sacrificed to preconceived and false impressions in relation to the disease.

Case I.

It occurred in an English gentleman, aged 35, of full habit of body, and who had committed some irregularities in his diet, to which the disease was attributed. Chills, followed by a hot stage, ushered in the disease, which soon developed itself by uneasy sensations in the abdomen, frequent and ineffective attempts at stool, and occasional discharges of mucus and slime slightly tinged with blood, tenesmus, &c. This case so evidently required depletion, that I could not omit having recourse to the measure; but it was employed to a very limited degree, and the skin was afterwards principally attended to. The diaphoretic I used was calomel and antimony, and the patient improved under their use; but, unfortunately, feeling somewhat better one morning, he most imprudently indulged himself in a hearty breakfast, which, to use his own phrase, he washed down with a bottle of claret. The consequence may be readily imagined. In the evening the disease returned upon him with all its violence, Experience has since convinced me, that if I ever had been called upon to use the most powerful depletion, this was a most imperative case. But the fears of debility and putrescency, and the prostration of the patient, paralyzed my arm and blinded my judgment. The prophecy of Johnson, in relation to inert practitioners in this disease, was literally accomplished in my case. "Some mornings he sees, with astonishment, several inches of the rectum, that have passed off by stool in the night!" This happened in the present instance, five inches of the gut being expelled in one of his efforts at stool; and a few nights after, (gangrene having previously supervened,) the case terminated fatally.

I now rejected the views which I at first entertained, and determined on pursuing the plan, which, although it had been

denominated bold, seemed called for by the powerful violence of the disease. The first instance which occurred thereafter, still further convinced me of the propriety of the measure.

Case II.

Mrs. L. J——, aged 30, mother of seven children, and a native of Curaçao, was, in the eighth month of her pregnancy, seized with severe symptoms of dysentery, such as fever, pain in the bowels on pressure, tenesmus, tormina, bloody and mucous discharges, and a full and quick pulse. I was called to see her on the second day of her disease. No longer deterred by fears of debility and putrescency, I forthwith had recourse to measures of depletion, as far as the situation of the patient would admit of, and then put her on the use of calomel in large doses. Every one conversant with disease, will readily perceive the delicacy of the case, and the difficulties with which I had to contend, on account of her peculiar condition. On the one hand, a violent disease, requiring severe and active treatment, threatened her life; on the other was to be encountered the danger of abortion, from one or both of these causes. Tenesmus was particularly to be dreaded. This symptom was therefore to be obviated in particular, and for this purpose the injection of the balsam copaibæ was found admirably useful. This measure is recommended by Pemberton,* according to the following formula:

℞. Mucilag. amyli. . . ℥iv.
Balsam copaib. . . gtt. xl.
M. Ft. enema, octava quaque hora injiciendum.

Under this treatment my patient recovered. She took, in three days, nearly a hundred grains of calomel, but no salivation ensued, nor was any other inconvenience felt. She went her full time, and I saw her delivered of a fine and healthy child.

I now pursued this treatment with such modifications as were required by particular cases, in almost every instance which came under my care, and I had no cause ever to regret

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* Pemberton's Treatise on Abdominal Diseases, p. 140.

it. In a black woman, who had long suffered under the disease, it proved eminently successful. She had been so exhausted, partly by the long continuance of the disease, partly by the constant use of remedies, purgatives, emetics, and sudorifics, that an old physician who had attended her, dismissed her from his care as incurable. She then applied to me, and I accepted the case, rather out of pity for her helpless condition, than from any hope of success. Under the use of scruple doses of calomel combined with opium, aided by tonics, such as infusion of chamomile flowers, with the addition of milk, she unexpectedly recovered.

During my visit to the Spanish Main, I had further opportunities of testing the virtues of this practice, and found it there equally successful as before. I may add too, that repeated instances of failure from the common modes pursued by the Dutch and Spanish physicians, fell under my notice. I had ample opportunities of witnessing this last fact, as the disease prevailed epidemically among the numerous Spanish emigrants at Curaçao, and the instances of fatal termination were but too frequent.

In New-York, I do not know that the treatment of dysentery by scruple doses of calomel, has been extensively tried. That it may be done so with safety, nay, with advantage, will appear from the following case. Before recording it, I may observe, that the objection which has been urged against the use of calomel in large doses, because it is inapplicable to the disease as it appears in the western hemisphere and in north latitudes, is altogether destitute of any force. The dysentery of the East Indies may indeed possess some characteristic and modifying symptoms which more pointedly indicate the use of mercury. But the modification it undergoes in other climes, is far from sufficient to constitute a difference in the essential phenomena, or, as it would be formerly called, in the proximate cause of the disease. The basis of the treatment must, therefore, be radically the same every where, and it is only requisite that the views of the practitioner be sufficiently comprehensive to enable him to grasp, with the same powerful means, properly modified, the dysentery of every climate.

Case III.

W. H. S——, aged 26, of a fair complexion and delicate habit, called, on the 17th of August, 1823, at my office, complaining of a diarrhœa, under which he had been labouring several days. I gave him a dose of rhubarb and magnesia, which operated well, and afforded him much relief. Feeling better the ensuing day, he went in the evening to Chatham Garden. The night was rainy and cool, and the roof of the theatre, at that time, ill calculated to defend those who were seated under it. A day or two after, he was suddenly affected after dinner, with severe rigors, and general symptoms of incipient fever. After an hour's duration of the cold fit, a reaction took place: his skin became hot, pulse full and quick, tongue furred white, and he complained of headache. As there were at this very time two or three suspicious cases of fever in the neighbourhood (John-street), his situation excited some alarm. A dose of salts was administered; I ordered pediluvium, and constant ablution with tepid vinegar and water. Towards evening, the disease manifested itself; the salts had operated, but the stools were soon after evidently dysenteric. Calomel gr. iv was forthwith administered, combined with antimony gr. iv and opium gr. i. to be repeated every four hours. Next day the patient was rather worse, and the medicine was more frequently administered, by which the stools were soon changed in their appearance for the better. After a few days he was considered convalescent, when he unadvisedly got up, dressed himself, and walked over a floor which was yet damp from scrubbing. The consequence was, that he immediately relapsed, the stools were increased in number, and looked worse than they had done before. They were green, mixed with streaks of blood and curdled pieces of mucus like cheese, and the tenesmus and tormina were excruciating. Twenty grains of calomel were now administered every six or eight hours, to which a grain of opium was occasionally added, according to circumstances. An ounce of castor oil was also interposed at times, to expedite a natural stool. From this treatment the patient did not immediately seem to benefit; but

it was notwithstanding continued, with the most confident hope of success. On the fourth day, symptoms of amelioration took place; the stools became more natural; the tenesmus and tormina were diminished, and the functions of both the skin and the liver were to a degree restored. Two scruple doses only were administered on this day and on the fifth. The sixth day only one dose was given, after which he was quite relieved, and gradually recovered. In this case no salivation was induced, although nearly three hundred grains of calomel had been taken in the short space of six days, exclusive of the quantity administered before the relapse. Neither has the patient, at any subsequent period, experienced the least inconvenience from the foregoing treatment.

It will therefore appear, that this practice is, to say the least of it, safe, and, judging from other cases which have since fallen under my observation, I feel convinced that it is more speedily efficacious than any other to which recourse can be had in the severe forms of this disease.

ART. X. NOTICE *of a* NEW INSTRUMENT *for Tying deep-seated Arteries; invented by* ALEXANDER E. HOSACK, M.D. Communicated in a letter to Professor ANDREW DUNCAN, of the University of Edinburgh, from DAVID HOSACK, M. D. &c. New-York.—(*With a Plate.*)

New-York, June 2d, 1824.

DEAR SIR,

IN the last number of your new series, as well as in the sixteenth volume of the first series of the Edinburgh Medical and Surgical Journal, you have exhibited different instruments which have lately been invented for tying deep-seated arteries. From the view of those, I am induced to enclose you the plan of another instrument, lately proposed for the same purpose by my son, Dr. Alexander E. Hosack. As you perceive by the annexed drawing, this instrument is simple; its construction easily applied to the deep-seated vessel; and it preserves

the threads at such distance, that upon tying the second knot the first remains perfectly undisturbed. I beg leave to add, that it has received the approbation of the Professors of Surgery in the medical schools of Philadelphia and New-York.

Mr. Williamson, of Edinburgh, who does me the favour to convey to you this note, is also the bearer of the instrument itself, which, after you have examined, I beg you to present to our friend and fellow student, Dr. Thompson, the Professor of Military Surgery in your University.

I am, dear Sir, with great regard and esteem, yours,

D. HOSACK.

ART. IX. CASE *of* ANTHRAX, *successfully treated.* Communicated in a letter to DAVID HOSACK, M. D. &c. By PETER S. TOWNSEND, M. D. of Nassau, New Providence, W. Ind.

THE subject of the following case is Mr. Gardner Baker, a tall, athletic man, of about 60 years of age, born in Long Island, in the State of New-York, and an early emigrant to the West Indies. The disease commenced on the 5th day of May, 1824, in the usual manner by a small pimple, which was mistaken for a boil, and treated as such, with poultices, until the tumefaction had extended so far as to induce them to send for medical aid.

I saw him first May the 9th. The tumour was then of a circular shape, about seven inches in diameter, and elevated about half an inch above the surface of the back, resembling in shape the bottom or bulging part of a dining plate inverted. It was of a deep bluish purple colour in the centre, and of a reddish purple towards the circumference or outer margin, where the tumour pitted on pressure of the finger, and appeared to be somewhat œdematous. The surface was perforated in a thousand places with small festers, which, however, were not elevated above the cuticle. From these, when broken, oozed out an unhealthy pus. In some places there were ulcerations, from whence issued a bloody sanies. There

had been for the first two or three days considerable constitutional fever, but at present the pulse was slow and feeble, and the skin cool. I recommended to Dr. Tynes, who attended in connexion with myself, the treatment so successfully employed by you in the case described in your letter to Dr. Pearson of London. We commenced with the antiseptic poultice of charcoal, alcohol, bark, and Indian meal. The general treatment consisted of tonics and generous living, as decoction of bark and infusion of snake root combined, brandy toddy, porter, port wine, sangaree, rich soups, jellies, &c. and every night or oftener, as occasion required, one or two grains of crude opium in pills, which last had the happiest effect, in tranquillizing the system, and subduing the extreme irritability and restlessness of which he complained.

May 10th. He has not had at any time severe pain. To-day he has incessant hiccup, and great difficulty of deglutition, the œsophagus seeming contracted, to use his own expression, to the size of a small quill.

May 15th. The surface of the tumour beset with innumerable small pustular perforations as before mentioned, which communicate with the internal cellular parenchyma of the tumour, but very few discharge. The more central parts of the tumour ulcerated into long, deep, foul, irregular fissures, which discharge very little. No fætor is emitted from any part of the tumour. Takes scarcely any nourishment, except some of his drinks, and then through a quill, and very seldom. The body of the tumour is less elevated, and softer, but the purple colour is deeper, and the constitutional strength more impaired. The hiccup declined to-day, and at night entirely left him.

May 17th. Great improvement—hiccup left him, and his gullet, he says, appears to have broken away, and he swallows without difficulty.—Was not the affection of the œsophagus and diaphragm owing to the proximity of the tumour to the cervical vertebræ, and of course to the origin of the nerves which supply those parts? The central part of the tumour has now broken away into a raw surface, intersected by irre-

gularly shaped cells of unequal size, divided by decussatory filaments and dissepementa, from whence the pus is now poured out very abundantly, so as to wet all the dressings. It is of a dirty, unhealthy colour. The cuticle on the outer parts of the tumour is not broken, and remains, as before, perforated by pustular openings.

May 19th. As his digestion is now so much improved that he takes his food and drinks freely, his bowels have become somewhat loose, owing perhaps, too, in some measure to the absorption of pus, which still continues to be discharged very copiously, so much so that the tumour has become quite flabby and rugated, and dependent at the lower part. The purple colour remains around it in a broad margin.

May 22d. The teguments and subjacent muscles on the central part of the tumour, and which for the last few days assumed the character of a membranous operculum to the excavation underneath, and which served the purpose of adhesive straps, to hold the opposing flaps together, now began to slough away, and to become separated from the outer parts of the tumour, which exhibited a reddish, fleshy, and healthy edge.

May 24th. The membranous slough which is stretched over the cavity, serves as a covering to prevent the too free admission of air, and the interstices between it and the margin above and below, allow a free evacuation to the pus, which is now thicker and of better colour. These openings also enable us to syringe the cavity freely with castile soap, rum and water, to which is added a decoction of bark. The depth of the cavity is about two and a half inches, and the muscular tissue of the back has been destroyed to such extent, that the spinous processes of the dorsal vertebræ and the posterior edges of the scapulæ are almost denuded. Has hitherto lain on his belly—begins now to lie on his side and back.

May 25th. The slough has come away entirely, leaving the cavity open, except about two inches of its circumference, which is covered by fleshy, loose flaps of a purple colour. From the edges of these flaps, and from the bottom of the

cavity, healthy granulations are shooting out. Emits some fætor.

May 29th. The fætor has gone. Large granulations are filling up the cavity, and those from the edges of the flaps are shooting down into and adhering to them. Has not of late sat up to be dressed.

June 16th. He has been rapidly improving. Now walks about, and smokes his pipe, and feels his general health as good as ever. The purple colour of the flaps still remains. The cavity is nearly filled up. Four bolsters are used to serve as pressure upon the four sides which the flaps make, and a figure-of-eight bandage going under the arm-pits and over the shoulders. Very little discharge takes place. The same poultice and treatment is continued. The flaps are syringed underneath with a stimulating astringent lotion. The cavity diagonally is about five and a half inches.

You will be pleased to know that the treatment you have advised for this disease has succeeded so well in this aggravated case.

Art. XII. *On the* Momordica Elaterium *and* Croton Tiglium. By John W. Francis, M. D. &c.

Multa renascentur, quæ jam cecidere; cadentque
Quæ nunc sunt in honore, vocabula.—Horace.

The influence which the Roman poet ascribes to custom in the use of words is perhaps still more strongly applicable to numerous articles of the materia medica. In tracing the history of many remedial agents, it is impossible not to observe that the lawless power of fashion is as manifest and imperious among the sages of the profession, as in affairs wherein mankind have agreed to surrender themselves up voluntarily to its capricious dominion. We can scarcely otherwise account for the various fortune which the articles at the head of this paper, in common with others that might be enumerated,

have experienced: at one time among the daily prescriptions of physicians, then in utter disuse or oblivion, and then again to be added to the list of our most efficient remedies.

Within a few years, the Elaterium and the Oil of Croton have each found favour in the eyes of the most intelligent British practitioners, in the treatment of cases which had obstinately resisted the best applied powers of appropriate medicines. The difficulty of obtaining these articles in their purity, is probably the most manifestly assignable cause why they have not been more generally prescribed by American physicians.

I first became practically acquainted with the medicinal qualities of the momordica elaterium in some casual visits to Manchester Infirmary in the autumn of 1815. The late excellent Dr. Ferriar, then just deceased, had introduced this potent article into the pharmacopœia of that extensive charity, and the clinical experience of that house fully justified what he set forth concerning its salutiferous properties. As an active cathartic, the elaterium had been long known: as an efficient agent to fulfil the indications of a powerful hydragogue, the most ample proofs were here presented. With this view, mainly, was the elaterium had recourse to by Dr. Ferriar. Having been disappointed by other hydragogues in a case of general dropsy he was induced to revive the use of the extract of elaterium, and I am persuaded that all he has advanced concerning this preparation, as a more certain remedy in dropsical complaints than any other now administered, is founded on well attested facts, and can easily be proved to the satifaction of every faithful observer.

The various and improper purposes for which the ancients employed the elaterium were doubtless in no inconsiderable degree the principal cause of its ultimately falling into disuse. We find Hippocrates noticing it as a most forcible cathartic, as capable of bringing on labour pains, and of expelling the fœtus, &c. Dioscorides, in remarking on its effects, observes: "Menses quoque ciet, partusque necat."* In cases of diffi-

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* Lib. iv.

cult respiration, whether depending on dropsy or on asthma, it was also given. Sydenham, Hoffman, and others, strongly enjoined its use in dropsy, and many earnestly contended for its efficacy in epilepsy and mania.* It was also applied externally as well as given internally. Its external use was particularly enforced for the relief of angina. Moreover, it would seem, that the term elaterium was applied by the ancients to several violent purgatives. Besides these causes of its loss of reputation, we find that different parts of the elaterium were in use to fulfil different indications, and likewise that the doses of different prescribers varied in quantity as well as in force. Hippocrates states the dose at ten grains. Dioscorides mentions the same in some places at five and at others at ten grains.—" Intergra dosis eius est, obolus ; minima, semiobolus." Fernelius at twenty grains ; Bontius, from one scruple to thirty grains. Boerhaave at five grains.† It is hard to account for these large quantities of the elaterium recommended by the ancient physicians, especially when we consider that the practitioners of the present time limit its dose to half a grain or a grain. Dr. Milligan, in a paper on the doses of the ancient physicians, has endeavoured to show, and I think successfully, that the difficulty is to be solved by supposing that in order to conceal the art of prescribing from the vulgar, the ancient physicians intentionally falsified their quantities, and, for convenience, did it always in a certain uniformly quadruple ratio : employing weights, indeed, graduated like those in common use, but secretly understood to be subject to this fourfold division.‡ Dr. Arbuthnot long since appears to have been of nearly the same opinion.§

I refer to Dr. Paris's Pharmacologia for much information concerning the proximate analysis of the elaterium. The late

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* Morton's Works.—Lister, De Hydrope.—Murray's Apparatus Medicaminum, Vol. I.—Alston's Materia Medica. &c.

† Dioscorid. Opera.—Murray's Apparatus Medicam.

‡ Milligan in Edin. Med. & Surg. Journal, April, 1820.

§ Ancient Weights and Measures.

experiments of Dr. Clutterbuck most conclusively show, that the active powers of this substance reside almost entirely, if not altogether, in a limpid fluid contained in the centre of the cucumber, and that no other portion of the plant possesses any active properties. "The active principle of this plant," says he,* "is neither lodged in the roots, leaves, flowers, nor stalks, in any considerable quantity; nor is it to be found in the body of the fruit, or in the seeds, but in the juice around the seeds." The material which is obtained from this juice, without pressure, is the genuine elaterium, the quantity of which is so small, that Dr. Clutterbuck procured only six grains from forty cucumbers. Dr. Paris, by experiments, gives it as his opinion, that only one grain in ten of the elaterium as it occurs in commerce possesses active properties, and to this part of its proximate principle he has given the name *elatin*.

The elaterium which I have occasionally used in prescription for seven years past, I obtained while in England. Experience has proved that it was such as might fully be depended upon. Hence the small doses to which I limited its administration. It is assuredly one of the most active of the articles of the materia medica; and applicable to many cases in which, so far as I can learn, it has not yet been given. As a drastic purgative, it may accomplish much in cases where our most approved cathartics frequently fail. Where local inflammation of the abdominal viscera exists, it must be preceded by the common antiphlogistic means; and extreme caution ought always to be exercised in using it in habits greatly debilitated by dropsy, chronic diarrhœa, and long protracted hepatic obstruction. Whatever may be our theories as to the causes and nature of dropsy, the disease is known to be of frequent occurrence and lamentable fatality. In a large majority of instances, the disorder may safely be referred to an increased action of the vessels, and a consequent increased secretion of

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* London Med. Repository, Vol. XII.

the serous fluid. After blood-letting, our means of relief are generally placed upon the scilla maritima alone, or united with small quantities of mercury. The elaterium in this form of dropsy will sometimes happily fulfil our indications. It may be questioned whether, in the passive stage of this disorder, the digitalis can ever be given advantageously: in this discouraging condition, where no organic derangement is present, the elaterium often possesses adequate powers of relief.

Dr. Ferriar has shown that it surpasses every other medicine in removing serous accumulations, and in relieving dyspnœa, arising from hydrothorax and ascites; and the twenty cases he has recorded, briefly as the particulars are related, are in confirmation. "The sensible effects of the elaterium," observes Dr. F. "are severe and constant nausea, frequent watery stools, and in considerable doses vomiting. It does not uniformly increase the urine, and for this reason it is generally proper to combine it with more certain diuretics. After continuing the use of the medicine for some days, the patient will sometimes bear a considerable increase of the dose. I have gone to the extent of five or six grains a day, in this manner, without producing any inconvenience. But it is always proper to begin with the lowest dose, which is a sixteenth part of a grain of the extract."*

I feel persuaded, that a more valuable or certain prescription than the elaterium for the purpose of mitigating the urgent symptoms of hydrothorax, if not of wholly removing the disorder cannot be found. It will often produce almost immediate relief, by frequent and copious watery alvine discharges, while its action is also occasionally manifested in the great increase of urine.

In some cases of ascites and anasarca, in which the squill, calomel, milk weed (asclepias syriaca), cremor tartar, jalap, gamboge, and other diuretics have been administered

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* Med. Hist. & Reflect. Vol. IV.

without their expected results, the elaterium has answered the desired effect. In the case of a gentleman, from the south, aged about 37 years, who had previously suffered several attacks of fever, and whose system was now labouring under dropsy in its combined form of hydrothorax and ascites, I prescribed the elaterium in quarter of a grain doses, morning, noon and evening. At the end of the second day the hydragogue effects of this medicine were conspicuous, notwithstanding all previous measures had proved unavailing on account of the torpid state of the intestines. He passed at least three quarts of fluid in each evacuation by the bowels, and was so far relieved as to be able to lie down in bed. His difficulty of breathing disappeared, and for a considerable time he enjoyed comparative ease and comfort. In another instance, of an elderly gentleman, (aged 69 years) suffering from ascites and an anasarcous state of the lower limbs, with great effusion in the scrotum, the approved means having failed, the elaterium prescribed to the extent of quarter of a grain four times a day, within forty-eight hours excited the action of the bowels, and he was disencumbered of full two gallons of fluid. I mention these particular examples of cases of disease in which we have no hope of ultimate success, because I think they satisfactorily show how efficient an agent we possess in the elaterium; and, to use the language of Dr. Ferriar, it is consolatory to have ascertained the efficacy of a remedy which seems to possess a complete power of removing simple effusion, and of at least alleviating the agonies arising from hydrothorax and ascites, even in the advanced stages of an incurable disease. Besides, it is deeply to be regretted, that through fear of its active qualities, physicians are so often deterred from its use even in such hopeless cases.

I might detail the particulars of several cases in which I have found it a safe and powerful hydragogue cathartic, answering all the indications to be fulfilled by remedies subservient to such purpose.

I have no experience of the effects of elaterium in arresting

the paroxysm of gout. Dr. Sutton,* in the treatment of this disorder, has advised elaterium in combination with opium, with the view, as it appears, of increasing the action of the exhalent vessels of the alimentary canal and the secreting functions of the kidneys. "But when I reflect," says Dr. Scudamore, "on the uncertain operation of the elaterium, and its injurious violence occasionally, even in small doses, I can but consider, that unless in a sluggish state of the bowels which is also joined with anasarcous swelling in the extremities, its active nature should be rather dreaded than chosen as a regular remedy in gout. Under certain indications, and within proper limitations, however, it is a medicine as useful as it is powerful."† These objections of Dr. Scudamore to the use of the elaterium in gout are perhaps well founded; but they are more strongly applicable to the whole class of nostrums which have been recommended and enforced at different times as specifics for the removal of this intractable complaint. We have just reason to apprehend an impaired or depraved tone of the digestive functions in almost every sufferer from gout, and the elaterium, like other potent agents, must ever be administered with proper regard to the modifying influence of the constitution. Nevertheless, I am not aware that the digestive powers of the stomach are weakened, or the bowels rendered inactive by its use.

I have generally prescribed the elaterium in combination with cream of tartar. A judicious and prudent course seems to be to commence its use with a quarter or the third of a grain three or four times a day, and seldom exceeding two grains, three times a day.

It is deemed unnecessary further to particularize instances of the salutary results which have followed the use of the elaterium. The work of Dr. Ferriar may be consulted by those desirous of conclusive testimony in behalf of this revived remedy. In the New-York Hospital, the good effects of the elaterium have

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* Tracts on Gout.

† Scudamore on Gout, third edition.

recently been seen in several cases under the care of Dr. Hosack, one of the physicians of that institution. I also learned from Dr. W. Smith, of the United States' Navy, that it was lately found a safe and efficacious hydragogue cathartic in the practice of Dr. Thomas Williamson at the Naval Hospital at Gosport, Virginia.

Croton Tiglium. This recently revived article of the materia medica has deservedly attracted the attention of the profession. As a hydragogue purgative it has been long known. Its active principle, it would appear, is a resinous matter, and Dr. Paris thinks it bears a strong analogy to that separated from the elaterium. It is to be feared it may lose a part of its well deserved reputation from the variety of indications which physicians expect it to fulfil. In certainty of operation, I have found it to possess a decided preference over every other cathartic. A comparison has been instituted between the properties of the elaterium and the oil of croton. The elaterium I have known occasionally to disappoint in its hydragogue effects. The evacuations induced by it are copious and watery: the croton is generally more speedy in its action, and frequently produces such discharges as result from the saline purgatives. A half drop or a half grain, either in a fluid form or made into pill will almost invariably excite the bowels. I have given it in the earlier months of pregnancy with safety and advantage. When prescribed to the extent of two drops, it has sometimes occasioned tremor of the whole system, dizziness of sight, an oppressed respiration, and unsteadiness of hand. We hence learn to use it with much caution. It may prove peculiarly serviceable in torpidity of the bowels, because it does not irritate like aloes, scammony, and gamboge. Whether as an emmenagogue it lays claim to special notice, is yet to be determined. The facility with which it may be administered, as well as the certainty of its action, are circumstances of no small consideration in behalf of its more general use.*

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* See Beck's edition of Murray's Mat. Med.—Eberle's Therapeutics.

About six weeks since, a formidable case of *constipation of the bowels* yielded to the influence of the croton oil, after having obstinately resisted calomel and the whole tribe of accustomed evacuants. The patient, a male subject, (aged about 38 years,) had previously sustained an attack of intermittent fever, and now laboured under the obstruction nine days, when the croton was at length given. I directed two drops every two hours, to be taken with some grateful aromatic. After he had taken six drops, we desisted from its further use. The bowels resumed their wonted office within ten hours from the time he took the first dose of the oil. After several copious passages, his safety was secured.

REVIEW.

ART. I. *A Practical Essay on* TYPHUS FEVER. By N. SMITH, M. D. Professor of the Theory and Practice of Physic and Surgery in Yale College. New-York. E. Bliss & E. White. 1824. pp. 88.

WE must confess that the expectations, which, from the well known talents and experience of the author, we had been led to form of the merits of this little work, have not been fully realized. Nor do we think the apology offered in the preface, " for any carelessness of style or inattention to arrangement," altogether satisfactory. When an author is about appearing before the public, it becomes his duty no less than it is his interest, to pay particular attention to the *manner* in which he communicates his thoughts. It will not indeed be denied that a dry detail of facts is as useful in conveying to the public the mere results of an author's experience as an elaborate treatise composed with every attention to style and arrangement. There is, however, a wide difference in the two instances, in as far as the interests of our professional literature are in the one case neglected and compromised, and in the other promoted; and surely, from a professor in one of our first literary institutions, some deference was due to this important consideration. As Dr. Smith has, however, indulged his readers with a hope that he will, at some future period, enlarge his work, we shall look forward with pleasure to an improvement in this respect, and in the meantime pass from the *manner* to the matter of his book.

Dr. Smith maintains, that from the description given of typhus by writers in Europe, and more especially in England.

there cannot be a doubt, but that it is similar to the disease known here by the same name, and also by the various names of long fever, slow fever, nervous fever, putrid fever, &c. Dr. S. does not stop to prove this assertion; neither was it necessary. His whole book is a sufficient refutation of the idle opinions to the contrary which have been advanced by some few writers, who, to maintain an absurd argument, and to appear more profoundly wise than their neighbours, would distort the plainest facts, and reject the most conclusive testimony. It has been likewise denied by writers of much the same stamp, that typhus prevails in warm climates, or in the warm season of temperate climates. Dr. Smith thus meets this denial:

"A late writer in one of our periodical journals, has advanced the opinion that typhus does not prevail in the warm season of temperate climates. This conjecture is unfounded, as *I have seen it* attended with all its characteristic marks *in every month*, and I believe I may say with truth, in every day of the year. *This fact might be attested by the whole medical faculty of New-England.*" p. 8.

How insignificant and unavailing is the boldest assertion and the most specious argument when thus confronted by plain matter of fact!

Our author has made particular inquiries to ascertain whether typhus was originally a disease of this country, but he has not as yet heard of an instance in which an aboriginal inhabitant has suffered from it. He acknowledges, however, that his inquiries have not been sufficiently extensive to warrant any conclusion on this subject. The observations of Dr. Rush, although of a general nature, and latterly those of Mr. Hunter, as published in the first volume of this Journal, incline us to believe that the disease does appear among the Indians when the causes which produce it among the whites are called into action among that people. This, however, we should suppose, *a priori*, from the habits of the Indians would but seldom be the case, and on this ground alone do we think their exemption from typhus will admit of explanation.

The following history of the appearance of the disease on Connecticut River will not prove unacceptable to our readers.

"When I commenced the practice of physic in 1787, in Cornish, N. H. a town situated on the banks of the Connecticut River, I was informed by physicians, as well as the inhabitants who had resided many years in that part of the country, that about twenty years previous, a fever, which they had called *nervous*, had prevailed in that vicinity—had soon after disappeared, and, for the twenty years next succeeding, had not returned in a solitary instance. It was eight years after, during which time I visited the sick pretty extensively in that and the adjacent towns, before I saw or heard of a single case of typhous fever. I was then called into a family, one member of which had died of this disease, and another then lay sick of it. Soon after, I left this portion of country, and was absent for about eighteen months, and was in consequence unable to trace the course of the disease; but in 1798, a year after my return, it made its appearance in the village surrounding Dartmouth College, twenty miles distant from Cornish, and in several neighbouring towns simultaneously. From that time to the present, a lapse of more than twenty-five years, I have never so far lost sight of the disease, as to be unable to follow its changes from one place to another, and to tell where it was prevailing.

"During this same period, it has appeared in all the New-England states, and as far west as my knowledge extends. Indeed it seems to possess a migratory character, and travels from place to place, and, after remaining in one village for a longer or shorter time, as, from one year to two or three, it ceases and appears in another." P. 9–10.

Dr. Smith has not observed that situation has any influence in producing or preventing typhus. It affects persons living on mountains no less than those in the valleys, on the plains, and on banks of rivers, and on the borders of lakes and ponds. Nor, according to the experience of our author, have occupation or habits of life, filth or poverty, made any difference in the liability of persons to receive the disease. The rich and the middling classes have suffered equally with the poor. This coincides with the facts stated in the paper on contagious fever, which appeared in the Edinburgh Review for March 1819.

Is typhus a contagious disease?

Dr. Smith is of opinion that the contagiousness of typhus can be as fully demonstrated as that of measles, small pox, and other diseases universally allowed to be contagious. We

are by no means prepared to agree with our author in the view here taken of this subject; and indeed we think he contradicts himself a page or two after, where he admits that "it is not so certainly and readily communicated as some other contagious diseases," (see p. 13.) How then, we would ask, can its contagiousness admit of as full demonstration as that of any disease universally allowed to be contagious? Our author next considers the arguments usually brought against the opinion that typhus is contagious, which, he says, are, that the contagion cannot be traced to its source, and that many persons exposed to it do not contract the disease. These objections, he adds, might be adduced against every contagious disease. Granting this, we may ask, are these, in fact, the only objections alleged against the belief for which Dr. S. is contending? We believe not. Among many other arguments which we have seen, we shall only state the following, and hope that they will, when Dr. Smith enjoys greater leisure, attract his attention.

First. The disease has no defined time of access.

Secondly. It has no determinate course to run.

Thirdly. It affects persons more than once.

Fourthly. It can be arrested in its progress. All these are characteristics which do not belong to contagious fevers; and although in other parts of his work Dr. S. will be found to deny them, yet, as they are matters of fact, resting on testimony the most ample and undeniable, we shall see that it is not so easy to get rid of them. Let us, however, consider the proofs which the respectable author adduces of the contagiousness of typhus.

First. The case of a young man, a pupil of Dr. S., who was attacked with typhus, from which he recovered. Some of his family, who lived about forty miles distant, came to visit and take care of him. On their return home they sickened with the same disease, and communicated it to others, who had not been exposed in the first instance. From this it spread to numerous other families. Dr. Smith further informs us, that in the town where this occurred, there had been no case of ty-

phus for many years, till thus brought there by contagion. Conclusive as a fact of this sort may appear to Dr. Smith, we think it is any thing but satisfactory in proof of the contagion of typhus. It is not accompanied with a statement of those circumstances which are always required to strengthen the principal point to be established. We are not told the names of the towns, nor the time when the circumstances occurred, all which are necessary to be known, in order to arrive at full and correct understanding of the facts connected with the case. But even with the vague and scanty information before us, we think it not very difficult to explain the occurrence of the disease in the persons affected subsequently to the young man from whom all the mischief is suspected to be derived, without having recourse to contagion at all. That part of the family which sickened after their return home from the place in which they had attended to their sick member, it will scarcely be disputed, were in all probability subjected to the same causes which produced the disease in the young man. But it is asserted, that "they communicated it to others." How is this proved? Our author has himself informed us that the disease, after disappearing for years, will make its re-appearance simultaneously in many towns. Is it not possible then, nay, very probable, that the disease may have thus re-appeared at the same time, both in the town in which the young man sickened, and likewise in that in which his family resided? When we consider that the contagion of yellow fever has been supported on facts of this same nature, and disproved by an analysis of these very facts, have we not reason to doubt, at least in the present instance? That we cannot carry our analysis further is the fault of our author. There is another ground still, on which the non-contagionist would deny the agency of this property in the case before us. Several members of a family lying sick at the same time with a malignant disease, would probably generate such quantities of idio-koino miasm, as to produce the disease in all those who came within their influence, and thus, too, would contagion be set aside.

Second Case. During the prevalence of typhus in Thet-

fort, Vermont, a woman from Chelsea, ten miles distant, came there to administer to a sister affected with the prevailing disease. Upon her return home, she was herself attacked by it, and soon after died. Several of her family took the disease; and in the course of four weeks there were thirty persons affected, "all of whom," says Dr. S., "had been exposed to the contagion." The remarks made on the last case will be equally applicable to this and to the third case.

Our author next combats the opinion lately maintained by Armstrong, and also by Good, that typhus arises from other causes besides contagion, such as marsh miasmata, the epidemic state of the atmosphere, cold, fatigue, &c. He says, "if it can be communicated from one person to another, it has a specific cause; and I know no disease that arises from a specific cause, that can be produced without the agency of that cause." P. 14–5.

Admitting the reasoning of our author to be correct, which we are by no means prepared to do, we fear we shall be compelled to follow Armstrong, and virtually abandon contagion; for the mass of testimony in favour of the production of genuine typhus by causes independent of contagion, is so abundant as to do away with the possibility of contradiction.

By the following extract, our readers will perceive that Dr. Smith is no unitarian in his doctrines relating to fever.

"The Typhous Fever, as far as my experience, which has been considerable, enables me to judge, is a disease *sui generis*, exhibiting as little variety in the different individuals affected by it, as some of the diseases which are acknowledged always to arise from contagion. If its duration is not so uniform as some of the contagious diseases, it is less irregular than others, which spring from specific causes, as for instance the intermitting fever." P. 15–16.

The experience of our author, which appears to have been considerable, is strongly in favour of the opinion that typhus rarely attacks the same individual twice, and this fact he adduces as a marked point of analogy between typhus and contagious diseases. He relates cases occurring in several families, in which all persons escaped who had been previously

affected. On this statement we can only observe, that it is at variance with the experience of a great number of our most able physicians, both among contagionists and non-contagionists, as Hosack,* Galup,† &c.

If any additional proofs were still wanting of the fallacy of the theory of John Hunter, which denied that two morbid actions can exist simultaneously in the same system, they are furnished by the experience of our author. He has seen hooping cough and the most malignant dysentery co-existing in the same individual. Typhus he has seen often combined with dysentery, thus confirming the statement of Mr. Harty to the same purport; and he has likewise observed its combinations with epidemic catarrh.

In the mention our author makes of the diseases with which typhus is liable to be confounded, he omits simple inflammatory fever, and for this reason, that he has never observed a case of this disease in the long course of his observations. He tells us further, that although he has practised in all the Eastern States, excepting Rhode-Island, for thirty-five years, he never witnessed a single case of continued fever, excepting typhus, which was not either small pox, measles, &c. or sympathetic of local inflammation. Our author admits that typhus is occasionally combined with local inflammation; but he is evidently no disciple of Broussais or Clutterbuck. In this respect we are glad to see that the physicians of our country generally coincide with Dr. Smith. Not all the attractions of the most splendid hypotheses of the Italian and French schools, nor the brilliant eloquence by which they are supported, are sufficient to warp the minds of our calm and sober practitioners. Experience has too long enforced the distinction between idiopathic and sympathetic fever, for the mere hand of the theorist to brush it away in a moment: nor would such a result, could it be effected, be at all friendly to successful practice. Any doctrine, in fact, which inculcates,

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* Hosack's Medical Essays, vol. I., p. 260.

* Galup's Sketches of Epidemic Diseases, p. 98.

in a disease that varies in its aspect like fever, an exclusive reliance on one set of remedies, cannot stand the test of experience. It may, indeed, be found applicable to the diseases of a certain epidemic constitution, as Sydenham would designate them; but subsequent changes in this particular would soon expose its fallacy.

As far as our author has observed, typhus rarely terminates under fourteen days from its commencement, and its duration seldom exceeds sixty.

There is no distinction made, and we think justly, between the proximate cause and the disease itself. The essential phenomena of the disease are what the physician must expect to encounter and remove; and every thing beyond, is mere speculation and airy nothingness.

We recommend the following views, in relation to the probable course of febrile action, as ingenious and clear.

"As this fever is supposed to make considerable change in the action of the circulating system; the question presents itself, what part is first affected? Does the increased action of the heart and great arteries cause the increased action in the capillaries, or *vice versa?*

In cases of local inflammation, which produce symptomatic fever, it appears very evident that the capillaries are first effected; the action of the heart and great arteries is not changed till symptomatic fever is produced; and that this symptomatic fever seems to commence in the capillaries, is evinced by the paleness of the skin, and the chills with which its first appearance is accompanied.

"The analogy between the inflammatory and febrile action is so great, that we may with confidence rely on the similarity of cause.

"The paleness of the skin, and the sense of cold spoken of above, which attend inflammation, and precede the attack of fever, or the development of those phenomena to which we usually apply the name, and which is followed by an increase of the action of the heart and arteries, I explain in the following manner. Before the diseased action can take possession of the capillary vessels, the natural and healthy one must cease, unless disease is a mere increase of the healthy action, which we have abundant reason to believe is not the case. It is during this interim, that is, between the interruption of the natural healthy action, and the complete establishment of the diseased one, that the patient feels the chill.

"Something of this kind is observed in cases of local inflammation, which still continues to extend itself. A few lines beyond the discoloured part of the skin, between that and the portion which still retains its natural tint.

there is a pale circ evidently showing that the action of the capillaries in that part is suspended.

When local inflammation proceeds so far as to produce symptomatic fever, a degree of paleness accompanied by chills, precedes the increase of heat.

"Upon the whole, whether we consider typhus fever as dependent on local inflammation or not, it is probable, nay, it is very certain, that, like all other febrile diseases, the morbid action commences and continues principally in the capillary system, and that the change which we perceive in the action of the heart and great arteries, is symptomatic of the disease existing in that system.

"The most violent affections of the heart and large arteries, as in palpitation, do not produce the slightest symptoms of fever, which serves to show that these two parts of the circulating system have diseases as distinct and different from each other, as their functions." P. 25–28.

The detail of symptoms is very satisfactory. First are considered the changes which take place in the functions of animal life, such as affections of the mind, of the senses, of sensibility, and of the organs of voluntary motion. Secondly, those which occur in organic life; under which head are enumerated those of the respiratory, circulatory, and digestive organs; also those of secretion and excretion generally, including the effects produced on animal heat. Upon this subject we do not deem it necessary to follow our author, but we must quote the following curious instance of the affection of the moral principle. It will recall to the learned reader's memory some parallel examples in the writings of Rush.

"It has appeared to me in some instances that the moral principle has been affected. One patient in particular, who had been extremely sick with this disease, after his recovery had a strong propensity to steal, and did in effect take some articles of clothing from a young man to whom he was under great obligations for the care he had taken of him during his sickness. He at length stole a horse and some money, was detected, and punished. I took some pains to inquire into the young man's former character, and found it good, and that his family were respectable." P. 32.

Dr. Smith has not been able to determine that any critical days exist in this disease, and he thinks it would be of little use, in a practical point of view, to do so; because, first, the disease comes on in so gradual a manner, that it is impossible

to fix on the day of its commencement; and, secondly, when it terminates favourably, it often vanishes in the same slow and imperceptible manner. We believe that in this view Dr. Smith will be confirmed by the generality of American physicians, but for reasons somewhat different from those assigned by him. Their treatment is in general so energetic, that whatever power the disease may originally have had, and whatever virulence it may have displayed, if unrestricted in its course, it must soon yield, and the disease be forthwith arrested, or so far changed as to be materially altered in its appearance. Hence the descriptions of disease by the older physicians are seldom realised in modern experience. We are aware that Dr. Smith will object to the view we have here taken, as he is of opinion that typhus cannot be arrested in its progress. But by a reference to his arguments, they will be found extremely unsatisfactory. We are not disposed to deny the author's assertion, that he has never succeeded in cutting short a single state of typhus; but giving to this argument all the force which it merits, it amounts to no more than so much negative proof. But Dr. Smith observes, that it must be extremely difficult to decide when an incipient fever is suddenly broken, whether or not it would have been typhus. That there is some difficulty in the case, no one, we presume, will deny; but this difficulty will be greater or less according to circumstances, and under certain circumstances it may altogether vanish. For example: during the prevalence of an epidemic typhus in a small neighbourhood, or hospital, if an individual exposed to the causes of the fever, or, as Dr. Smith would say, to the contagion thereof, becomes affected with the same symptoms by which the disease was introduced in all those previously affected therewith, could there be any moral doubt as to its nature and the form it would assume? Would any experienced physician call in question the propriety of resorting to the most active remedies which were in use, for the purpose of subduing the prevailing disorder? He surely would not fear to encounter a case of yellow fever! Where the invading symptoms too are severe, as they often are, we

cannot conceive the possibility of any difficulty in the diagnosis. The question, therefore, may be fairly put, have such cases been arrested? The histories of typhus contain so many instances of this, that it were doing injustice to our readers to suppose it necessary to quote them. We may, however, refer Dr. Smith to the pages of Drs. Miner and Tully, practitioners in his own state, for sufficient proof that the disease of which he treats has been repeatedly, nay often, arrested. We are surprised, in fact, that he should not have noticed their authority upon this subject, as it is founded on quite as ample experience as his own.

The author, therefore, rejects all measures in the commencement of the disorder, which are applied with a view of stopping short its career. He does not, however, neglect to attempt rendering its course milder and safer, and to enable the patient to live through it, but follows a method similar in principle to that advisable in small pox, or any other disease arising from a specific cause. It will at once appear that Dr. Smith is indebted to his belief in contagion for his rejection of the most important measure within the reach of a practitioner on his first encountering this disease. It is this which has paralyzed the efforts of so many physicians when they have been called upon to treat the plague, the yellow fever, dysentery, and all the host of fevers erroneously termed contagious. It has with some done still more injury; it has inspired them with imaginary fears of debility and putrefaction arising from the influence of contagion, and armed them with a whole phalanx of cordial, invigorating tonics, to oppose a disease under the strength of which the system is already labouring sufficiently, and from which it only asks to be free.

From some remarks which follow, we are somewhat inclined to the opinion that Dr. Smith has not met with many severe cases of typhus, otherwise he would not seriously insist, that all powerful remedies in the early stages of typhus are likely to *do harm!* The same opinion, we suspect, must be entertained of the physican who observed to Dr. Smith, that his entire treatment of typhus patients consisted in giving

them milk and water through the whole course of the disease; that he had treated in this manner "quite a number of patients, and had not lost a single one!" From what we have seen and read of typhus, we should be loath indeed to make such an experiment, much less to recommend it to others.

Our author next inquires, if it is determined that something shall be done, what that something shall be? The first thing usually suggested is bloodletting. On this important measure our author has some very judicious remarks, which he premises by a short history of the opposite views entertained in relation to it by Cullen, Brown, and their disciples, and by Armstrong, Pritchard, and the physicians of the present day. In New-England, the physicians appear to be very much divided on this subject. One party employ bloodletting to a great extent in almost every case of this disorder; while another, impelled, as it were, by a re-action, have recourse to the most powerful stimulants, as opium, alcohol, Cayenne pepper, arsenic, &c. Dr. Smith has seen a written prescription of one of this latter class, in which opium, wine, alcohol, cantharides, and arsenic, were all directed to be taken several times in the course of twenty-four hours. As might be expected, both parties boast of success, and reproach each other with failure. For the equal success of these two opposite modes of treating the same disease, our author thinks that there are two ways of accounting. Either the disease is not so much under the control of bloodletting as they would have us believe, or these two extremes produce about an equal degree of mischief. To us this appears to be every thing but an explanation. It is in fact stating the same thing under a different form. The last position particularly is but the converse of the former assertion. Two opposite modes are equally successful, because the power of doing harm possessed by the one is not greater than that of the other. We should say that success in either was owing to the applicability of the treatment to the particular cases in which it proved beneficial. It will not be denied by our author, that there are cases of typhus requiring opposite treatment, some being attended with

excitement of the system, and of course requiring depletion; others again with depression, or, as they would be called, cold cases of typhus, and these it would be necessary to meet with stimulants and tonics. Failure, on the other hand, must necessarily attend a misapplication of these means.

From all that we have seen in the writings of the Connecticut physicians, we must be compelled to form this conclusion, that the typhus which has prevailed in that state of late years, appears under the mildest form, the typhus mitior of the nosologists, or very soon assumes the asthenic type. On no other grounds can we explain the success of the milk and water system spoken of in this volume, and the capsicum and alcohol plan so strenuously insisted on by Drs. Miner and Tully. Certain it is, that neither of these methods are applicable to the typhus of our state and further south. We here observe pretty much the same distinction in the disease as is so admirably laid down in the descriptions of the writers against whom the Connecticut physicians love so much to declaim. The same method of treatment, at least so far as respects the principles upon which it rests, is equally successful in the hands of our physicians, as it has been found to be in those of Armstrong and his countrymen. We have before had occasion to express our honest conviction, that it is to the labours of Rush that the profession both here and abroad are indebted for the great improvements in the theory and practice of fevers, which shed so much lustre on the present day. His claims, it is true, are seldom adverted to. Many of our own physicians even overlook his merits, and some are so unblushing as to lay claim to originality for entertaining views long ago introduced to the notice of the profession by that great man; but their pretensions meet with little notice or respect, excepting from their own dependants and sycophants. It is our pride, and ever shall be considered the most gratifying portion of our public duties, to vindicate the claims of Rush to the respect and admiration due to his eminent talents, learning, and success.

To return to Dr. Smith: he recommends bloodletting in those cases only in which there is great pain, accompanied with a sense of fulness in the head or chest. The loss of blood to the amount of from twelve to sixteen ounces, tends to mitigate these symptoms, and renders the disease both safer and milder. He has not observed, however, that this measure induces any change in the disease, or renders the pulse slower, nor the heat less. All we can say by way of comment is, that the experience of our author is in direct opposition to that of the first authorities on typhus fever.

"In some cases, in which I have resorted to this expedient, I feel confident that the pulse became more frequent, and the temperature of the body higher, in consequence of the loss of a pound of blood." P. 52–53.

This fact, so far from being a proof in support of the view entertained by our author of the power of bloodletting, is in our opinion directly contradictory of it. The reader acquainted with typhus fever, will scarcely need be informed, that the cases in which bloodletting raises the pulse and elevates the temperature, are instances of congestive typhus, in which the circulation labours under oppression, from which the detraction of blood immediately relieves it. This, it will be readily perceived, is in strict accordance with the facts recorded by Rush, Armstrong, and others who advocate this measure; and it requires but an extension of the same principle to come to the conclusion, that bloodletting not only effects salutary changes in these cases of congestion, but that it must also produce them, and with a far greater efficacy where typhus is attended with inflammatory action. Dr. Smith must therefore have laboured under some strange delusion, when he was blind to the changes produced by bloodletting in this or any other disorder.

Pursuing the same principles throughout the disease, Dr. Smith denies that either emetics or cathartics are called for in every case of typhus. Nevertheless as they are *at times* necessary, he lays down the following symptoms as indicating their use; nausea, or sickness and oppression at the stomach.

We believe this rule to be a pretty safe one, and if we are not much mistaken, there will be few cases of typhus met with, out of Dr. Smith's practice, that do not indicate the necessity of recourse being had to it.

Emetics. Tartrite of antimony is condemned in typhus, as wholly inapplicable even in cases where an attendant inflammation exists, because this latter is never considered by our author as of the phlegmonic species. Where emetics therefore are indicated, he substitutes the ipecacuanha, eupatorium or the sulphate of zinc. These articles he considers proper and safe in whatever stage of the disorder they may be required.

Cathartics. The more powerful ones are denounced as always injurious. The costiveness which occurs in typhus, is stated by our author to be of a very different character from that which is habitual with some individuals, where the stools are unfrequent, and the fæces hard. In typhus they are always liquid.

"The costiveness therefore," he says, "consists only in the unfrequency of the discharges, and not in their consistence." p. 60.

We confess that we do not see any force in this argument against the use of cathartics. What may be the principle upon which our author would administer them, and by which he would explain their beneficial operation, we do not clearly understand. If it be with the mere view of removing costiveness, we consider that it falls short of the important end for which these remedies should be given. This we consider to be not only to dislodge and remove the matter which accumulates in the intestines during the early periods of the fever, but likewise to open a sluice for the evacuation of the fluids of the body, and to derive them in this manner from any one organ to which they may be attracted, and thus prevent or remove those local congestions which so frequently occur in fevers. Another important object is to excite a counter-irritation, a local disease in the intestines, by which means the affection of the whole system may be diminished, if not entirely removed.

Dr. Smith urges another objection against cathartics on the ground that diarrhœa is too apt to ensue from their use. This consequence has not been *often* observed by others. *Laxatives*, such as Epsom salts with senna, rhubarb with a very small quantity of calomel or ipecacuanha, are very strongly recommended.

Blisters according to our author do not possess much influence over the disease, and may therefore be dispensed with. Here too he differs from the standard authorities.

Diaphoretics. These are likewise rejected by our author either as useless or as injurious, particularly when much external heat is applied. Ipecacuanha, contrayerva, and the Virginia and Seneca snake roots, may be given *with impunity*, "though they seldom or never produce any sensible perspiration, till the disease has formed a crisis, and then the patient will perspire freely without their assistance." On this paragraph we deem it superfluous to suggest any comment to our readers.

Opium is not considered by Dr. Smith as applicable to typhus. After the violence of the headache is abated and the heat becomes moderate, it will occasionally, if combined with ipecacuanha give rest and quietness. It most frequently, however, does harm, and is therefore at best but a doubtful remedy.

Mercury. As might have been anticipated, this remedy is no favourite with our author. He enumerates several instances in which it has produced very injurious effects, such as gangrene of the gums, necrosis of the lower jaw, also others in which although the mouth became affected by mercury, the disease nevertheless ran on forty or fifty days, and sometimes terminated fatally. He does not therefore consider it a specific in typhus, but allows it may be an useful auxiliary in certain cases, "that is, blue pill or a small portion of calomel combined with opium to check a diarrhœa, or *a grain* of the same with rhubarb as a laxative." This is truly not *American* practice.

We pass over the remarks on cinchona and tonics generally, and come to the consideration of *cold water* as an effectual agent in reducing the temperature, whether taken internally or applied externally. Our author directs that cold water should never be refused to patients in typhus, when they desire it. They should be allowed to drink *ad libitum*. The following is the method of external application found useful by Dr. Smith.

"The method, which I have adopted, is to turn down the bed-clothes and to dash from a pint to a gallon of cold water on the patient's head, face and body, so as to wet both the bed and body linen thoroughly. It is better that he should lie on a straw bed when this is done, it is not, however, essential. If his body should be very hot, he may be turned upon his side, and the water dashed upon his back.

"As soon as his linen and the bed-clothes begin to dry, and the heat in the head and breast begins to return to the surface, the water should be again applied, and in this way the heat may be kept down to the natural standard or rather below, on the surface, so that the skin may feel rather cool to the hand of a healthy person.

"It is not very material what the temperature of the water is, if it is below blood heat, excepting the shock given by its first contact, which in cases where there is much stupor or coma, is of some importance; in general, the effect is produced chiefly by the evaporation." pp. 74, 75.

Some very interesting cases are added, in which this application was employed with eminent success. These form, of course, exceptions to the general experience of Dr. Smith, which has led him to rely so much, in this disease, on the *ars expectandi*.

This closes our observations on Dr. Smith's work. We have been as ample in our details as our limits would admit; the more so, because we wish to record in our pages every fact which can throw light on the history of typhus in our country. As our population increases, the causes which generate and foster this disease, as poverty, filth, and distress, will be called more into operation; and it becomes, therefore, important for the guardians of the public safety to understand the nature of the disease, in order that they may more fully check its advance and arrest its progress.

ART. II. MEDICAL DISSERTATION *on the Diagnosis and Treatment of* PERTUSSIS, *or* CHIN-COUGH, *which obtained the Boylston Premium for* 1822. By A. L. PEIRSON, M. D. Fellow of the Massachusetts Medical Society. Salem, 1824, pp. 51.

FROM the prevalence of hooping cough, and the mortality which attends it, we feel disposed to look with a favourable eye upon every attempt to enlarge the stock of our information in relation to its history and mode of treatment. Under this impression, we shall present our readers with some account of Dr. Peirson's Dissertation, which is the more entitled to consideration, as the opinions of the author profess to be the result of no inconsiderable experience.

As the subjects proposed for the Boylston prize were merely the "diagnosis and treatment of pertussis," Dr. P. has properly enough confined himself, as far as practicable, to the consideration of these two points. He has accordingly passed over, with a very slight notice, some of the more interesting questions relating to the disease.

With regard to its atmospheric origin, he simply states, that if any disease has a right to claim such an origin it is this, inasmuch as where it makes its appearance, it attacks persons simultaneously, without the slightest intercourse with each other. The contagiousness of the disease he considers "still involved in some doubts, although the most numerous probabilities lie on the affirmative side."

A humid and variable state of the air is considered most favourable to the prevalence of pertussis; and hence it occurs more frequently in the opening of the spring and autumn, in moist climates and upon our sea-coast.

Without entering upon the examination of the seat of the disease, Dr. P. simply asserts it to "be in the mucous membrane lining the trachea, bronchiæ, and air cells;" at the same time he admits that, "from the great quantity of glairy

mucus furnished by the stomach, this organ participates in the disease."

Dr. P. divides the disease into three stages, and under these he gives so faithful a description of its symptoms, that we shall quote it at length.

"The *first* is that in which the specific cause remains latent, corresponding to the first stage, or *period of incubation* in the exanthemata; it *lasts from one to three weeks*, and cannot, in all cases, be distinguished from the symptoms of a common cold, or catarrh. The best diagnosis between the two may be formed by observing that pertussis *attacks but once* during life —that *the cough is more dry*, and that there is less watering of the eyes and running at the nose, and *less of febrile excitement*, than in catarrh.

"The prevalence of pertussis as an epidemic, would also bring suspicion upon symptoms, which might otherwise pass unnoticed. It is rare that physicians have an opportunity to decide upon the complaint in its first stage, but, admitting the contagious nature of the disease, the diagnosis may, for very obvious reasons, become a point of the highest importance.

"The *second* stage of pertussis is clearly shown by the peculiar nature of the cough. This consists in a succession of very rapid and forcible expirations, succeeded by a long and sonorous inspiration, after which the expiratory efforts again commence, and the sonorous inspiration or whoop again follows; this succession is repeated till a quantity of mucus is thrown from the lungs, or the contents of the stomach are ejected, either of which generally puts an end to the paroxysm. During the expiratory efforts, the blood is forced to the head with great violence, the lips and eye-lids swell, and the whole face is purple and turgid, and a hæmorrhage not unfrequently takes place from the nose and mouth. Dizziness and vertigo are produced by the same cause; and the patient, being conscious of this, immediately, upon perceiving the access of a paroxysm, seeks the support of the first object within his reach, to which he clings till the fit is over. Although instances of asphyxia and suffocation do, *very rarely*, occur from the violence of the concussion of these paroxysms, yet, in general, it is astonishing to perceive, how instantaneously, after the paroxysm is finished, the little patient returns, with undiminished spirits, to his playthings, or his food. The appetite, in general, is not diminished, but rather, from the frequent evacuation of the stomach without nausea, the desire for food is augmented.

"The fits of coughing come on at irregular intervals, and do not require any exciting cause to produce them. They are, nevertheless, produced at any time by a sudden motion, by crying or laughing, by distention of the stomach with food, by the effort of deglutition, especially if such effort be compulsory, as the forcing down of medicine, &c. and sometimes even by the association of ideas in the child's mind, at the sight of the cup or spoon containing the medicine. The *force of example* may be an exciting cause.

so that the business of the school room has often required to be suspended, from the interruption produced by the incessant coughing kept up by this cause.

" The duration of the second stage is from three to four weeks, during the first part of which time, the violence of the disorder seems to increase, and during the latter part, remains stationary, at its height. The reason of this is to be sought in the peculiar nature of the inflammation, which *creeps* from one part of the mucous membrane to another; for it is obvious, that if the whole surface were affected at once, the inflammation, and of course the cough, would not remain stationary, but would sooner reach its acme, and more suddenly decline.

" The commencement of the *third* stage is denoted by a perceptible *change in the expectoration.* Whereas it before was thin, transparent, and raised with much effort, and sparing in quantity—it now becomes thick, abundant, and more easily thrown up. This stage of the disease varies in its duration more than either of the others; complete convalescence being sometimes established in four weeks, at others, the characteristic cough continuing for as many months. The tardiness of the convalescence is proportionate to the violence of the symptoms of the second stage, to the weakness of the patient, and the diminished temperature of the air." pp. 6, 7, 8, 9.

It has been a question, concerning which some of the first medical men have differed, whether pertussis is always accompanied with febrile excitement. Dr. P. believes the true state of the case to be, that " pertussis, in its simple state, is unattended by any marks of inflammatory fever; but it *very commonly* happens that a catarrhal affection of the lungs accompanies the specific disease, and the symptoms usually attending this affection are those of general inflammation."

Diagnosis. From cynanche trachealis, bronchitis, pneumonia, and the spasmodic asthma of children, it may easily be distinguished by the peculiar character of the cough, which, in pertussis, " consists of a great number of rapid, expiratory efforts, followed at last by a sonorous, full inspiration, in which circumstances it materially differs from all the rest." From croup and quinsey it differs in " its mode of attack not being sudden, and from all of them in having an epidemic origin, and in the exciting cause of the paroxysm."

The *Prognosis* according to our author, may be gathered from the following circumstances.

"1st. The age of the patient—a very tender age being unfavourable. When infants do not vomit the mucus of expectoration, they are sometimes in danger of being suffocated by it.

"2d. The state of the patient previous to the accession of pertussis, and the existence of other diseases. Tubercles, existing in the lungs, often being accelerated, and sometimes inflamed, in consequence of pertussis, become a very dangerous accompaniment to this disease. Dentition, also, especially in irritable habits, augments the danger of the disease.

"3d. The degree and nature of the constitutional affection, or symptomatic fever. Convulsions and epilepsy sometimes occur from the disturbance produced in the system by pertussis.

"4th. The ease, or difficulty of breathing. The free transmission of blood through the lungs is interrupted by the violence of the fits of coughing—and in consequence of this obstruction, its free return from the vessels of the head, whence it is carried with unusual force, is also impeded. A moderate hæmorrhage coming on from the mouth and nose, in this state of things, is to be accounted a favourable circumstance, although a profuse evacuation of blood may bring on dangerous debility. It is but just, however, to state, that, although this sort of hæmorrhage is a very frequent occurrence, it has never happened to the writer to see an instance in which *any injury* arose from it.

"5th. The occurrence of inflammation, or the tendency to such occurrence, in the pulmonary apparatus." pp. 11, 12.

Treatment. This occupies by far the largest portion of Dr. P.'s dissertation, and contains a good deal of interesting matter. The indications laid down for managing this disease are, 1st, to remove all offending matters from the stomach and bowels; 2d, to shorten the period of the complaint; 3d, to guard against the inflammation of any of the respiratory organs, and to obviate such inflammation when it does occur; 4th, to preserve the vigour of the system by a proper attention to clothing, diet, air, and exercise; 5th, to restore the healthy functions and remove the cough and other symptoms, which sometimes remain long after the specific disease which accompanied them has disappeared. We shall briefly notice the means for fulfilling each of these indications.

To answer the *first*, emetics and cathartics are called for. Of the former ipecacuanha is justly considered preferable to any

other. Among the latter, the submuriate of mercury is recommended to be administered either before or after the emetic. Three grains are considered a full dose for a child of one year. If this should not move the bowels sufficiently, it may be aided by castor oil. The vomiting and purging should be repeated throughout the disorder as often as the stomach and bowels suffer from accumulation.

In treating of the *second* indication, Dr. P. takes an extensive survey of the various means which have been recommended at different times, and by different authors. He considers all of them, however, "extremely vague and uncertain."

Narcotics. With the view of diminishing the morbid sensibility of the parts affected, this class of remedies has been very generally resorted to in the treatment of pertussis. Of these, opium, digitalis, and conium maculatum have been most relied on. According to Dr. P. opium "effects but little good when given in the second stage." "It may be given as a palliative, when there exists no heat, thirst or other mark of pyrexia, and it may then conduce somewhat to lessen the frequency and violence of the paroxysms." He adds, however, that it is liable to two great objections, viz. of increasing the disposition to coma and producing costiveness.

Digitalis, Dr. P. has found the most useful of all the narcotics in pertussis.

"It is undoubtedly a contra-stimulus, and therefore appropriate to the nature of the disease; and, from the great excitability of the urinary apparatus in children, it produces diuresis more speedily and certainly than in adults. This circumstance makes it a much safer medicine than it otherwise would be, since, if it creates a discharge, the danger of an accumulation of its effects is much diminished. It is most conveniently given in the form of tincture. Six drops of a saturated tincture may safely be given to a child one year old, at intervals of six hours. This dose may be increased, by one drop at a time, till a diuretic effect is produced, or the state of the pulse indicate its diminution or suspension. Under the use of digitalis the fit of coughing will frequently be at longer intervals and less violent, and convalescence will be accelerated. So far from being liable, where an inflammatory determination to the lungs exists, to the objections against opium, it is frequently employed to advantage as an auxiliary to the appropriate remedies for such a state." p. 15.

Conium maculatum was first recommended as a remedy in pertussis by Dr. Butter, by whom it was very highly extolled. Dr. P. looks upon it "undoubtedly as a safe and in many instances a useful narcotic." He adds, that he has seen the following formula successful in several cases.

℞ Extr. Conii. . . . . ʒj.
Tr. Camphoræ opiatæ . . ℥fs.
Syrup. Tolutani . . . . ʒfs.
Aq. Rosarum . . . . ʒiv. misce.

From a half to a whole teaspoonful may be given once in four hours to a child one year old.

Cantharides. It is to Drs. Sutcliff and Letsom that this remedy owes its chief celebrity in this disease, and the saturated tincture is the form in which it is usually prescribed.

"It may be given every three hours, beginning with a dose of two drops for a child one year old, and increased until symptoms of strangury appear, soon after which a decided abatement, and frequently almost a cessation of the peculiar cough will take place." pp. 16, 17.

Alkaline remedies. The most popular of these is the carbonate of soda, as recommended in the following prescription by Dr. Richard Pearson.

℞ Carbonat. Sodæ
Vin. Ipecac. āā ʒj.
Tr. Opii. gtt. xx.
Aquæ ʒiifs. misce.

A teaspoonful to be given every two or three hours, to a child of a year old.

Our author however does not place much confidence in this or any other of the alkaline remedies. If they have any effect at all, he thinks, it is only where they correct acidity in the stomach and bowels, and he further asserts that every possible advantage of this kind may be gained by adding lime water or carbonate of soda to the milk which is given to children for food

Antispasmodics. Assafœtida is the only article of this class of remedies which Dr. P. considers entitled to any regard. He speaks of it in the following terms.

"Under its use, it certainly does appear that the appetite improves, the violence of the cough is abated, and quiet sleep is induced. What is quite remarkable, is, that children, although at first disgusted with the smell of the medicine, almost always acquire a relish for the flavour of it, so that they frequently ask for it. The best method of employing it is to give it five or six times a day, and especially at bed time, in as large quantities as the stomach will bear, in the form of a julep, or emulsion." pp. 19, 20.

Arsenic. Of this article Dr. P. says nothing from his own experience. Dr. Ferriar, with whom it was a favourite remedy in pertussis, directs it to be given, in the form of Fowler's solution, every night in doses of from one to two drops for a child one year old, taking care to prevent its accumulation in the system by occasional purges.

Emetics. Dr. P. concurs in the opinion generally entertained in favour of this class of remedies in cutting short the progress of pertussis. "Probably no class of medicines," he adds, "have been more successful in bringing about this object."

"Nature herself seems to point to the use of them. For it is observed in all cases where the patients vomit easily at every fit of coughing, the disease is more mild than where the vomiting does not take place. By vomiting, not only is the mucus discharged from the stomach, but such an impression is made on the system at large as assists the powers of nature in altering the train of morbid actions." pp. 20, 21.

Sulphate of zinc, ipecacuanha, and antimony are the articles generally used, and indeed are abundantly sufficient to answer every indication. If the object is simply to evacuate the stomach, the zinc may be given in doses of five grains dissolved in water to a child of a year old, and repeated every ten minutes until it operates. The ipecacuanha, along with its emetic effect, produces at the same time diaphoresis and a discharge from the bowels. The tartrite of antimony is, how-

ever, preferred by our author as superior to every other emetic.

"It evacuates the stomach, opens the bowels and cutaneous vessels, and subdues the first appearance of an inflammatory tendency. It is not one of its least recommendations, that it does not offend the palate, and may be given in any vehicle without suspicion. For so easily are the kinks of coughing excited, that the least offer of constraint, such as is necessary to exhibit medicine to a child, may bring on a paroxysm, which will baffle all the address of the best nurse, or attendant. To produce the best effect of antimony, it should be given in such small doses as to remain for some time upon the stomach. In cases where children do not readily vomit, the most unquiet period is during the night. This is partly occasioned by the food and other matters swallowed during the day. It is desirable, therefore, that the stomach should be placed in such a situation, that the contents of it may be ejected, should a severe fit of coughing occur. This purpose is very easily effected by mixing with the quantity of drink which the child usually requires during the night, from one half to one grain of the tartrite of antimony, for a subject one year old. The use of this medicine accords extremely well with that of moderate doses of opium, by which its purgative quality is restrained. A moderate dose of paregoric at bed-time, and the antimonial drink during the night, will, in a great number of cases, abate the violence, and shorten the duration of the disease." p. 22.

Purgatives. After the bowels have been thoroughly evacuated in the commencement of the disorder, Dr. P. thinks very little is to be expected from their use. Where a tendency to inflammation exists, purges of calomel may be given in doses of two or three grains for a child of a year old.

Tar Vapour. Of this remedy Dr. P. appears to have had no experience. By Dr. Robert Watt who has written with much ability on this subject, it is highly spoken of. "His mode of administering it was, to shut up the patient and its attendant, in a small close room, filled with the fumes of burning tar. The patient was ordered to be kept in the room until a paroxysm of coughing followed by vomiting, should have taken place; after which the respiration and sleep were generally improved."

Topical applications. Blisters, tartar emetic ointment, the

combination of Struve,* &c. &c. are all considered by Dr. P. as of very little efficacy in arresting the disease.

Prussic Acid. The experience of Dr. P. with the prussic acid seems to have been quite ample. And he states the result of it to be "unfavourable to the character which it has obtained in the cure of pertussis. Although it checked the progress of the cough in some of the milder cases, it appeared inadequate to subdue the severe ones. In some cases, during its use, the cough certainly abated, but in others the disorder pursued its course unchecked." Dr. P. concludes his observations on the prussic acid with the following remarks:

"From the experience very imperfectly set forth, we think the prussic acid promises so much that it ought not to be wholly rejected, but is deserving of farther trial. But we think we are warranted in recommending that the faith of such sanguine writers as Dr. Granville, be received by the faculty "cum grano salis." The excellent good sense and discrimination discovered by Dr. Elliotson in his brief but satisfactory treatise, gives great weight to his opinion, which seems to be, that although the prussic acid affords relief to the *functional disorders of the stomach*, and to some other complaints, yet it is altogether *useless in pertussis.* It is indeed to be regretted that the hydro-cyanic acid should have fallen so far short of expectation on this side the Atlantic. But it cannot be concealed that the high encomiums bestowed upon this medicine in the treatment of tetanus, hysteria, phthisis pulmonalis, and pertussis, have not been realized with us." p. 30.

We come now to our author's *third* indication which is to guard against and obviate inflammation. In fulfilling this indication, *bloodletting* is justly considered of primary importance. Wherever symptoms of inflammatory action accompany the disease, this remedy is indicated, and its use should by no means be neglected. Dr. P. very properly observes, that "the apparent feebleness of the subject, does not contra-indicate the use of the lancet. The more feeble, the less able is the subject to sustain the complication of disease which threatens or exists. The greater danger is the neglect of this

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* R. Antimon. tartrit. . . gr. xx.
Tr. meloes. vesic. . . oz. j.
Aquæ . . . . . oz. ij. M.
To be applied over the region of the stomach every 2 or 3 hours.

evacuation." In relation to the cases described by Watt, Dr. P. remarks that the dissection proves them to have been cases of bronchitis, and adds that "the experience of this able writer, does not prove so much the necessity of bleeding for *simple* pertussis, as for the inflammatory affections accompanying the original specific disease."

In addition to venesection, recourse must be had in this stage to purgatives, especially of calomel, diaphoretics and the warm bath. The diaphoretics most to be depended upon, are the antimonial preparations. Dr. P. adds, that "a saturated solution of carbonate of potass or of soda, particularly the former, will sometimes be found useful in effecting diaphoresis."

Under the *fourth* indication, Dr. P. furnishes some judicious directions concerning food, clothing, &c.

The *food* should be light, nutritious, and non-stimulating. "Milk," according to Dr. P. "stands at the head of all other articles, and should constitute the principal part of the food of children in pertussis."

The *clothing* of children with pertussis should be warm; and in winter, or where the lungs are weak, flannel should be worn next the skin.

Air, exercise, and friction of the skin, are also highly necessary in this disease. "The early part of every day is the best time for carrying children abroad, and when out, their attention should be excited, but not fatigued."

For fulfilling the *last* indication, our author mentions change of place—the cold bath—cinchona—the various preparations of iron, and the emplastrum gummosum, or Burgundy pitch, applied to the back, between the shoulders, and extending round upon the ribs. Of the chalybeates, Dr. P. gives the preference to the phosphate of iron, and recommends the following formula.

℞	Phosphat. ferri. . . .	℥j.
	Syrup tolutan. . . .	℥j.
	Pulv. gum. acaciæ . .	ʒj.
	Aquæ	℥iij. Misce.

One teaspoonful of this may be given every four hours to a child one year old, to be increased as the stomach becomes accustomed to its use.

The remainder of Dr. Peirson's Dissertation is occupied with the details of sixteen cases of pertussis in which the prussic acid was tried, together with some additional remarks, in which he presents us with the following conclusions.

"1. The Whooping Cough is not often in itself a fatal disease. When it becomes so, it is from being combined with other complaints, especially inflammatory affections of the respiratory organs, and the diseases usually occurring at the period of dentition. It is a considerable proof of the mildness of the disease, that so many comparatively inert articles should be reputed specifics in its cure.

"2. At the access of the disease, perhaps during the first week, the healthy functions are somewhat deranged, but after that period are performed nearly as usual.

"3. That the complaint is one of specific duration.

"4. That the most successful mode of treatment is that which is founded upon principles of general pathology, without a minute attention to the specific disease.—By which I mean, that if the dangerous symptoms *not peculiar* to pertussis be successfully combatted, the specific disease will require but little attention.

"5. That a change of air, particularly removal from town to country, has far more effect than any other remedy, and becomes indispensable in many cases where from any causes the patient is much enfeebled. It is proper to add, that removal does not merit this high commendation if undertaken during the first fortnight, before the characteristic symptoms of the complaint are clearly manifested." p. 50, 51.

In closing our analysis of Dr. Peirson, we have to thank him for the very instructive and at the same time unostentatious essay with which he has presented the medical public, concerning a disease whose treatment is, we fear, even in the hands of regularly bred physicians, still too much under the dominion of empiricism.

Medical and Philosophical Intelligence.

DOMESTIC.

Effects of Arsenic.—We have recently received a communication on the pernicious consequences arising from the action of arsenic when externally applied, from which we shall abstract the most prominent facts. We need scarcely remark how very general the use of this mineral is in the hands of illiterate prescribers in almost all cases of a cancerous nature, real or supposed, and that human life is not unfrequently and most suddenly cut off by the sinister arts of these audacious pretenders. The conjecture of Dr. Moore Hoit, the author of this communication, is well founded. Among the consequences arising from the improper application of arsenic are constitutional prostration, paralysis, and sudden death.

Peekskill, May 14th, 1824.

" In the month of January 1823, I was consulted by Miss R. F——, of this village, on account of a small tumour, situated in the hollow between the angle of the lower jaw and mastoid process. The tumour was at this time about the size of a walnut, without pain, and the integuments of a natural appearance. Her constitution and general health, good; age, about twenty-three.

" The only opinion I could form of the disease was that of a chronic enlargement of a lobe of the parotid gland, the body of the gland not exhibiting any appearance of disease. I gave but little encouragement as to effecting a cure; however, by request was induced to attempt it. The means made use of, were friction, electricity, the application of emp. ammo. c. hydrarg. also the internal use of alkalies, and occasionally cathartic doses of calomel, which repeatedly produced a slight affection of the salivary glands, but all without effect.

" About the first of May following, I could discover little or no alteration in the tumour; it certainly had not diminished in the least. At this time she repaired to New-York, and consulted a practitioner, who told her the tumour was merely a scrofulous one, and in his hands could be cured. She submitted to his course of treatment for six or eight months, some time after the expiration of which, I again saw the patient. The tumour was now of an oval form, about three inches in length and two in diameter, strictly preserving in other respects its primary appearance.

" Some time in the month of March last, a fellow, by report from New York or Brooklyn, calling himself an " *Indian doctor*," undertook the cure

of the tumour, which he termed a " wen." With all the particulars of his proceedings I am unacquainted: he, however, made one or two incisions through the skin, and then applied an " *eating plaster.*" The patient soon began to feel the effects of its voracious appetite—an inflammation, I believe of the whole abdominal viscera took place, attended by vomiting of a black and highly offensive matter, stools of the same with membranous shreds, general and severe pain, and prostration of strength. Towards the last of April, he told her friends that typhus fever had " set in," abandoned his victim, and went to New-York. On the 28th of April, I was requested to call and examine the patient. I found her in a very debilitated state, but without any of the appearances that are usually exhibited at the close of typhus fever. Her tongue was red and dry, covered with a fine red eruption, with three or four ulcerations upon it about half the size of a pea—teeth clean—the gums in every respect healthy—the voice hoarse, with considerable difficulty of articulation—the breath had a peculiar fætor—skin and pulse nearly or quite natural—eye good—was informed that there had been a profuse salivation. The surface of the tumour was covered with a dark slough; the application then in use was a bread and milk poultice. Was informed that at that time the vomiting was less; also the pain in the abdomen. I did not see the patient again till early on the morning of the first inst. when I was called, in great alarm. She was now evidently sinking, complained occasionally of distress in the abdomen, which was much distended—stupor—greater difficulty of articulation—pulse weak and irregular—skin covered with a clammy moisture. At noon, pulse scarcely perceptible—respiration laborious and rattling—3 o'clock, P. M. death. Within an hour after death livid patches began to appear on different parts of the body. About 18 hours after death, the body was extremely putrid and offensive.

" I have not been able to procure any of the plasters for examination; but the circumstances of the case are to me " confirmation strong" that the patient died from poison of arsenic, absorbed and carried into the system from the applications made to the tumour."

Extract of a letter from Dr. Peter P. Galatian, to the Rev. Dr. Upfold, of New-York, dated Walden, July 30, 1824.

" Dear Sir,—Agreeable to my promise, I send the following history of a case of adhesion of the pericardium to the heart, as fully as the few notes taken at the time will permit. E. daughter of A. Smith, of this village, after two successive attacks of acute rheumatism, was observed about the first of February 1823, to have a more than common action of the chest, and repeated with every pulsation of the heart, which continued to increase until the first of April, when I was called to see her, in company with Dr. C. of this place. The doctor could not pronounce whether it was hydrops pericardii, or an aneurism. The case presenting something new, I was induced to refer to some authors for information. After searching for some

time in vain, I recollected an essay of Professor Mott, in the first volume of the Physico-Medical Transactions, entitled thoughts on pulsation in epigastrio. Finding there the previous affections and present symptoms of my patient so perfectly described, without hesitation I pronounced it a case of adhesion of the pericardium to the heart; the action of the chest could be seen across the room, extending to the epigastrium, together with a hurried and difficult respiration, from the commencement of which all rheumatic affection had ceased. On the fifth of April she died. With great persuasion I got permission to examine the seat of the disease. On elevating the sternum, and opening the pericardium at the right auricle, we found a general adhesion: that over the right ventricle was slight, the threads would easily yield; but carrying the fingers around the apex, there was a perfect union between the membrane and the heart itself.

"Although the relation of cases of this kind is not of any importance in a curative point of view, as when such diseased changes take place, the patient is beyond the reach of art, and the commencement of the disorder so insidious as to escape observation; yet it is satisfactory to the friends, as well as the physician, to be enabled to form a just conclusion of the nature of the disease. With this view of it, I place the above at your disposal."

"*The New-York Monthly Chronicle of Medicine and Surgery*, conducted by an association of physicians." Since the publication of our last number, a Medical Journal has been started in this city, upon a plan differing somewhat from the journals already published in this country. All the articles are intended to be anonymous, and the editors accordingly announce in their prospectus, that their object is, not "to interfere with the many respectable journals already published in this country, but to supply the void caused by their indiscriminate rejection of anonymous articles, however great the ability or ingenuity with which they may come recommended." Of the three numbers which have appeared, we can only say that they are conducted with spirit and ability, and that we wish the work success.

An Inaugural Address, delivered before the Medical Society of the County of New-York, July 12th, 1824. By David Hosack, M. D. &c. President of the Society.—The act of the Legislature, passed in the year 1806, establishing medical societies in the several counties of the State of New-York, has at least been productive of one good effect, that of subjecting practitioners to a degree of constraint and control from which it has been too much the fashion of the times to exempt them. However strange it may appear, certain it is, that in the great concerns of life and health mankind seem willing unadvisedly to trust themselves to those from whom, even in the slightest affairs of interest, they are accustomed to require some evidence of knowledge or ability. Even in some of the most enlightened states of our Union, in defiance of common sense and common

discretion, any unfledged individual, with the ordinary requisite of impudence, is suffered to assume the care of the health of our people without fear and without reproach. We have always considered the statute of 1806 as the precursor of a better state of things, and cannot but welcome with applause every attempt to place upon a better foundation the practice of the healing art.

The Medical Society of the county of New-York deserve our best thanks for the zeal and ability they have manifested in this salutary work. In an institution composed of so many eminent members of the faculty, much was to be anticipated, and we have the earnest that much will be accomplished. The distinguished President of the Society, in the discourse before us, has clearly set forth many plans of improvement, which will doubtless engage the attention of those to whom it was addressed.

We shall here extract a part of Dr. Hosack's address, from which our readers may form a better idea of its particular objects and character.

"This leads me then to inquire, first, what are the great objects for which such professional intercourse and solemn associations have been established in the state? and secondly, what are the means by which the benefits contemplated are to be secured?

"The objects referred to divide themselves under two heads: firstly, to regulate; and, secondly, to improve the practice of physic and surgery.

"For the attainment of the first of these objects, this Society has been very laudably and successfully engaged in framing a code of ethics which has received the approbation of the faculty, both at home and abroad.

"The State Medical Society has given its imprimatur to that code, and has recognised it in every thing essential; not only to place the practice of the healing art upon an honourable and liberal basis, but to regulate the intercourse between the members of the medical faculty in such manner, and upon such principles, that their observance cannot fail to preserve that elevation and respectability to which the profession has attained in the most cultivated ranks of society. A foreign journalist,* noticing our code of police regulations as recently published, expresses himself in terms of high approbation, and recommends them as meriting peculiar regard, and as reflecting the highest credit upon those who had performed the arduous task of propounding and constituting such code of regulations.

"I pass on to notice the means of effecting the latter object, that of improving the healing art, and of extending the benefits to be derived from this Association.

"That we may preserve the honour and respectability of the profession, none should be permitted to practise it who have not been legally received, either as Doctors of Medicine or as Licentiates, agreeably to the provisions of the act of the state legislature. From many facts which have come to my knowledge, there is good reason to believe, that in this city and in its

* See Johnson, Med. Chir. Review, for March 1824.

vicinity, many ignorant pretenders, who commenced their career as acknowledged venders of quack medicines, are now prescribing for the sick, and are in the daily violation of the laws of the state. Connected with this subject, is the unwarrantable practice which has obtained among some of our apothecaries, and those of them too the least qualified, of prescribing for the sick who may apply at their shops for the purchase of drugs; and in some instances they have had even the arrogance to suppress the prescriptions of the physician, and to substitute their own combinations.

"It therefore becomes the duty of this Society, agreeably to the act passed in 1813, to interpose, and to arrest these impositions upon the community, and which are to be considered as among the greatest evils that can befall society. I therefore propose that a special committee be appointed, or that it be made the duty of the Censors, or of the Comitia Minora, to obtain and to report to this Society, a census of all the physicians and surgeons and legally admitted practitioners of medicine in the city of New-York, classing them under the following heads:

"1st. Those who were established in practice prior to the act of incorporation passed in the year 1813.

"2d. Those who are graduates of this University, or of the Colleges or Universities of other states.

"3d. Those who have been licensed in New-York, or have been admitted to practise by producing licenses from other states.

"4th. Those who are practising under licenses or degrees obtained from foreign Universities and governments.

"Such census also becomes necessary, as it leads us to a knowledge of such persons as may be in practice, who, though well qualified, may have neglected to exhibit the evidence of their education and qualifications, as directed by the act of the legislature and the by-laws of this Society.

"By these measures we shall be enabled to carry into operation the provisions of the law for restraining those who may be illegally engaged in practice; and by so doing perform a duty imperatively enjoined upon the County Societies, an act of justice to the profession, and especially to the public, who are not always competent to discriminate between the impostor and the well-educated physician.

"The existing laws of this state, regulating the practice of physic and surgery, the statutes of our University, and the code of by-laws of this Society, I believe contain provisions, which, if properly regarded, will in a great degree lead to the suppression of every species of quackery and imposition in our profession. In all ages our calling has been disgraced by the arts of the selfish and designing; and it is mortifying to observe in our own city continued and most flagrant evidences of the successful career of charlatanry. I earnestly hope you will omit no effort within the legitimate reach of your authority, to discountenance and suppress the whole tribe of *nostrum* venders and *specific* mongers; and if, upon experience, you shall find that the present system of regulations is inadequate, that it

will be deemed meet to supersede it by obtaining from our legislature a code of greater efficiency and vigour.

"Many years since, the Medical Faculty of London expelled from their communion even the distinguished and learned Dr. James, who, disregarding the obligations due to his profession and to society, became the vender of a secret febrifuge powder. In like manner, the most learned Society of Europe erased from their lists the name of the celebrated Lower, who had been convicted of venal practices. And within a few months, as we are informed by Dr. Johnson,* the name of Dr. Thornton, once highly respectable, has been in a similar manner disgraced, by being struck from the list of the Royal College of Physicians, because of his association with an itinerant quack, or vender of American herbs in London. The spirited journalist goes on to remark, that, in his opinion, "Dr. Thornton's conduct, in aiding the Whitlow imposition on public credulity, richly deserved this mark of disapprobation;" and adds his hope, "that immoral as well as unprofessional conduct shall be often served in this way in future." A similar coarse of decisive and vigorous conduct on our part would probably be productive of similar beneficial results, in preserving the respectability of the healing art in the United States.

"Indeed, gentlemen, I cannot withhold the expression of the mortification I feel when I see the members of our profession, some, too, enjoying the most distinguished seats in our Universities, descending from their high estate, and lending the sanction of professorial authority to any new syrup or panacea that cupidity and the arts of the impostor can combine to fill the purses of the venders."

Case of Mania, in which the Scutellaria Lateriflora was freely given. By Dr. John Neilson, Physician to the New-York Asylum.

R. M——, aged 27 years, a native of Ireland, and, for several years past, a merchant of this city, was admitted into the asylum 11th September, 1820. Has been always of a strong constitution, and naturally of a lively disposition, but of high pride, and irritable temper. It was observed by his friends, that for several months past he had been rather melancholy and reserved. For several days previous to his admission into the asylum, he exhibited marks of a disturbed state of mind. His own affairs were prosperous, and there was no assignable cause for this state of mind. A friend of his, however, had been involved in some unpleasant business, which had caused him some concern, and he had remarked that "it was a vexatious business, but that he would trouble himself no more about it." He now became suspicious of his food, and removed from one public house to another. He was advised by a friend to make an excursion into the country for a few days. He accordingly left the city and proceeded as far as Am-

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* See Medico-Chirurgical Review for December 1823.

boy, where he only staid a few minutes, and then returned. He now seemed worse than ever, and on the 10th September, got out on the roof of his store in Pine-street, where he acted very wildly. A solution of tartar emetic was given him in some water, which vomited him considerably, but did not produce the desired effect of causing him to come into the house. While in this situation, having tied a bandage round his arm, he divided one of the large superficial veins of the forearm, with a nail, which bled profusely; after remaining on the roof for about twelve hours, he of his own accord came down and went to bed. In a few hours, however, he became so furious, that his friends were obliged to confine him in a strait waistcoat, and it was deemed advisable to place him in the asylum. When brought into the house he was outrageously violent. His pulse was full and strong, and his countenance and actions indicative of the greatest fury. He was immediately put into the shower bath, in which, having remained a few minutes, he promised to be submissive, and when taken out and freed from the strait waistcoat, he walked up to his room, and remained comparatively peaceable and quiet for a few hours. It may be proper to remark, that his impression, on being brought to the asylum, was, that he was going to a masonic lodge. In the evening he appeared quite composed, was directed ipecacuanha and tartar emetic, which operated freely. He remained very quiet all night. The next morning, contrary to directions, a person appointed to superintend him, permitted Mr. M. to leave his room, and come down stairs, and there left him alone, while he went away to tell his friends how much better the patient was. The patient found in the kitchen a large table knife, the blade of which he broke off from the handle, and concealed in his shoe: with this, after he had been taken back to his apartment and left alone, he found means to open the door, and come out into the hall; he here bound his suspenders round each arm, and, with the blade of the knife, made a large, deep incision in the bend of each elbow, dividing the large veins, and some of the smaller branches of the artery—he was discovered in a few moments bleeding profusely from each arm. The hæmorrhage was immediately stopped, and at this moment I came into the house; his wounds were dressed, wine and arrow root were administered to him. He remained all this day very much agitated in mind. Once or twice he fainted. His strength was supported by light nourishment. It was found necessary to confine his hands. Towards evening he became so furious and ungovernable, that it was found necessary to confine him to his bed.

13th. Appears more composed this morning, and promises not to injure himself. He was unbound, and directions were given to keep him as silent and quiet as possible, he took some nourishment and soon fell asleep.

It may be remarked that his pulse, which after the loss of blood was small and scarcely perceptible, had now become full and frequent, though soft. Towards evening he became more excited, and suspicious of every

one; as night approached, it was again found necessary to confine him to his bed.

14th. Has been very restless all night, but is more composed this morning, and promises to remain quiet if let loose; this was done, and his bowels being costive, he was directed sulphate of magnesia one ounce, and tartar emetic, one grain. This produced vomiting: he remained much as yesterday.

15th. Exhibits more febrile excitement this morning; bowels costive, was directed sulphate of magnesia one ounce, which operated freely. A blister was applied to the nape of the neck.

16th. Blister did not draw well: is wild and incoherent in his conversation, and violent in his actions; has torn the wounds in his arms open with his fingers, and from one of them pulled out the head of one of the flexor muscles of the hand: his wounds were immediately dressed. He remained tolerably composed during the remainder of the day.

17th. Has passed a comfortable night, and is at present quite calm. It is observed that he rolls up his eyes like a child with hydrocephalus, seeming to indicate some organic derangement of the brain: let another blister be applied to the nape of the neck.

18th. Blister drew well, and he appears quite natural this morning, he dressed himself, and walked out. In the night he became very furious, and pulled the dressings off his arms. He attempted to kill himself: this he did repeatedly. It was found necessary again to confine him closely to his bed.

19th. Is quite submissive, and appears quite exhausted from the violence of his exertions; continued quiet all day, but the aberration of mind still appears very great.

20th. Continues much the same as yesterday. His hands manacled to prevent his injuring himself. His diet is light and nutritive.

21st. This morning was seized with another paroxysm of fury, during which he dashed his head violently against the wall, and cut and bruised it severely.

22d. Alienation of mind still continues very great, and he appears bent on self-destruction. This morning, in a paroxysm of rage and fury, he bit a part of his tongue nearly off, chewing and bruising it, till the blood ran from the corners of his mouth. His tongue, and the lower part of his face are very much swollen, and he is unable to take any food except liquids, or to articulate distinctly.

23d. Continues much as yesterday, very much distressed, and being strongly impressed with the idea of his being about to suffer death.

24th. He is rather more composed to-day. It being conjectured that these paroxysms might depend upon nervous irritation, he was directed the use of the Scutellaria lateriflora, (skullcap) half an ounce of the dried herb to be infused in a pint of boiling water, one-third to be taken three times a day.

25th. Has had do return of his paroxysms of fury, and has been comparatively quiet; has had a copious evacuation from the intestines of dark coloured and offensive matter; takes freely arrow-root and his infusion of scutellaria, as yesterday; the wound of his tongue is very foul; he uses Bell's gargle, and washes his mouth with fresh yest; the wounds of his arms are healing.

26th. Discovers a degree of alienation of mind, but has had no return of his paroxysms, and remains composed and freed from his manacles. The skullcap has increased considerably the secretion of urine and of saliva, and reduced the frequency of his pulse, which is now slow and soft: as his strength is much reduced he was directed a little wine with his arrow-root: ordered sulphate of magnesia for the bowels.

27th. Medicine operated well.

28th. Not so well to-day; refuses every kind of medicine or nourishment; is irritable, and at times approximates towards frenzy; continue medicine.

29th. Has passed a quiet night, and is tolerably composed; let him have an ounce sulph. magnesiæ.

30th. Took his salts readily, which operated well; is more composed and rational this morning; continue the scutellaria.

Oct. 1st. In the morning was quite composed, and took his nourishment and medicine freely; continue scutellaria and light nourishment.

2d. Quite calm to-day; pulse slow, skin natural, tongue healing up by granulations, a small part of it having sloughed off; continue the medicine.

3d. Continues very peaceable; continue the scutellaria.

4th. Has passed a comfortable night, and appears disposed to be left alone; ordered to discontinue the scutellaria to-day.

5th. Much the same as yesterday; aperient medicine operated freely on the bowels; let a blister be applied to the nape of the neck, and resume the use of the scutellaria.

6th. Has been very calm since our last visit, and rather disposed to taciturnity. Pulse 50, and soft; quantity of urine greater than usual: continue the medicine.

7th. Is much the same as yesterday; discharges large quantities of urine, and exhibits symptoms of a returning appetite; continue scutellaria.

8th. Much the same. Pulse 56.

9th. Is incoherent this morning; seems rather suspicious again of the food that is brought to him.

10th. Quite calm and peaceable this morning; and continued so through the day, till towards evening.

11th. No visible alteration: at times he is quite calm.

12th. Very much excited this morning, talking in a hurried and incoherent manner. Pulse more frequent, skin and tongue natural; let him again be put upon the use of the skullcap.

13th. More composed to-day.

14th. Much as yesterday, alienation of mind still continues, but exhibited no marks of violence or rage.

15th. More excited this morning, and has refused to take the scutellaria.

16th. Much the same, has continued rather excited in mind through the day. Resumed the use of the scutellaria.

17th. More composed. Pulse soft and slower; continues the scutellaria.

18th. Quite calm and composed to-day. Pulse 46, and soft; skin and tongue natural. In the afternoon he became restless and uneasy in his mind, and made an attempt to escape from his room. Refuses to take any nourishment or the scutellaria. It may here be remarked, that since he commenced taking this last remedy, his pulse has been diminished in strength and frequency, and his urine and saliva very sensibly increased. Continues scutellaria.

20th and 21st. No visible alteration.

24th. Continues to improve.

27th. Not quite so well, lies in bed. Pulse, skin, and tongue natural; bowels costive. Omit the scutellaria, and ordered to take the sulphate of magnesia one ounce, and tartar emetic one grain.

28th. Medicines operated well: is more composed.

Nov. 4th. Remains perfectly quiet.

5th. Sullen, and seems sinking into a state of fatuity; in order to arouse him from this state of torpor and increasing dulness, he was directed to have the shower-bath every morning.

6th. After the administration of the bath, of which he complained, he became for a time excited: but again relapsed into his former torpid state; let the bath be repeated.

7th. Much improved; he dresses himself, and walks out in the hall; let the bath be repeated.

8th. Much improved, countenance brighter, bodily health good. It being thought that a change of air and exercise might prove serviceable to him, and he being so much improved in body and mind; with the concurrence of his friends, he was this day, November 20, 1820, discharged.

Extract of a Letter to one of the Editors, from Dr. W. Rogers, of New-Orleans, dated August 25, 1824.

The yellow fever made its appearance among us some ten or fifteen days since. Its character is more typhoid than I have ever before witnessed, admitting of little or no depletion. In the cases which have been treated by myself, a brisk purgative, with local applications during its course, together with stimulation by mercury and camph. gr. ij. every two hours, have been the most successful. The headache which remains when the pulse has fallen, is best relieved by vesication ad nuch. The stimulation by the calomel and camphor to cease when the glands become affected, then a decoction of bark, light nourishment, &c. I have used nitric and muriatic drinks with occasional advantage. I will, with your permission, give you something on this disease in the winter.

FOREIGN.

On the use of Iodine in Goitre and Scrofula. (*Jour. Complément. Fevr.* 1824, xvii. 305.)—This Journal contains a long and interesting memoir on the medicinal use of iodine, by Dr. J. G. Kolley, of Breslau; who completely confirms the statements of former writers as to its efficacy in some diseases, and adds some important particulars relative to the circumstances under which good effects may be anticipated from it. He always used it in the form of tincture, as first proposed by Dr. Coindet. He has found that it does not agree with persons of a sensible nervous habit; in them a very few doses excite restlessness, lassitude, weight and pain in the head, tremors of the limbs, moroseness, spasms, a sense of anxiety in the chest, and invincible repugnance to continue the remedy. It likewise disagrees with very robust, muscular individuals, accustomed to vigorous nourishment, especially if they are liable to determination of blood towards the head: in such persons it is apt to cause headaches so violent as almost to drive them to madness; and if employed at all, must be conjoined with laxatives. Wine-bibbers are similarly circumstanced. If there is the slightest disorder of the stomach or intestinal canal, iodine is apt to cause dyspepsia. Febrile and inflammatory diseases are quite incompatable with it; and so are diarrhœa, local urinary disorders, phthisis, all local affections of the lungs, stomach, and liver, and in general all internal diseases that have a tendency to run on to suppuration. In cases of goitre its success depends on the tumour being actually situated in the thyroid gland,—on the gland being neither scirrhous nor carcinomatous, nor filled with hard concretions or other analogous productions,—on the disease being not too old,—on the absence of cachexy, hectic fever, and derangement of the *primæ viæ*,—on the goitre itself being neither inflamed nor painful. If care be taken to abstract these circumstances, Dr. Kolley considers that the practitioner will very rarely fail of success. With regard to scrofula (scrofulous glands and sores, we presume; for his description is not very clear), he remarks, that iodine often shows singular activity in dissipating that disease. But to insure its success, or even its safe administration, the patient must be neither hectic, nor phthisical, nor disposed to be so. In the case of children, a steady regimen is requisite, great cleanliness must be observed, they should be kept in a pretty uniform temperature; and if they are very irritable, of a weak habit, liable to diarrhœa, or hydrocephalus, the remedy must be used with great caution, or avoided altogether. In scrofula he found it of great advantage to combine the iodine with mercury. The cases he has selected from his practice are twelve in number, five of goitre, three of scrofula, and four of eruptive diseases described under the convenient general title of *dartre*. We shall notice briefly his success in the first two diseases. The first case of goitre is a most admirable history of that disorder as it occurred in himself. It had existed for many years, had

reached such a size as to impede greatly his speech and breathing, and all remedies had been directed against it in vain. He took the tincture of iodine for twelve weeks; in about a month the tumour began to swell a little and soften, then diminished, and at the end of the twelfth week had disappeared almost entirely. The second case is that of a girl 18 years old, in whom the disease had existed since her fifth year. When she had used the iodine for a month, the tumour began to diminish: after taking it for sixteen weeks, her stomach began to be affected, and consequently the remedy was abandoned: when the author saw her three months afterwards no trace of the goitre remained. The third patient, a stout man, 36 years of age, with a large goitre of twenty years standing, took the iodine for eight weeks; and the tumour disappeared entirely four weeks afterwards. In the fourth, a girl of 19, the disease was of sixteen years standing. During the third week of the treatment she was seized with a sense of anxiety, heat in the throat, and excessive faintness each time she took the iodine. In consequence no consideration could induce her to persevere, though the tumour began to decrease. Dr. Kolley is ignorant of the issue in this case. The last was an incipient case, accompanied with hypochondriasis. The tumour was removed in no long time, as well as many of the sensations referred by the patient to the disease in the neck; but he continued liable to congestions in the head. Of the three scrofulous cases, one was a most deplorable example of the ravages occasioned by a scrofulous diathesis of the most exquisite kind. Among other maladies she had enlargement of the cervical glands, and suppuration of several of them, accompanied with the discharge of serous matter. All the anti-scrofulous remedies had been exhausted upon her in vain. When the iodine had been continued four weeks, in the dose of five drops (tincture) thrice aday, the sores began to discharge a thicker yellow pus, some of them appeared about to cicatrize, and the swellings in the neck diminished. At this period the iodine was intermitted, calomel was given to gentle salivation, and the iodine then resumed. In eight weeks the sores were all healed, and the swellings gone; and the patient never experienced an unpleasant symptom. Ten months afterwards the cure continued permanent. The second case was one of most obstinate and complicated strumous ophthalmia in a well characterized scrofulous habit. All remedies had proved unavailing. In fifteen days there was a sensible amendment under the use of the iodine; and in three months the ophthalmia and all its effects which were curable had disappeared. The third patient, a child of four years, liable to severe strumous ophthalmia, which had resisted all sorts of treatment, got well in two months, under the combined use of iodine and mercury. In both cases of ophthalmia, Dr. Kolley thought it necessary to remove the active state of the inflammation by ordinary means, before resorting to the iodine.—*Edinburgh Med. and Surg. Journal.*

M. Trasmondi on two New Nerves of the Eye.—This may be called the pickings of the discovery made by Dr. Horner of the tensor tarsi muscle of the eye, [see Number 3 of this Journal]. In dissecting the tensor tarsi, M. Trasmondi discovered two small nerves running to it from the external nasal twig, the last subdivision of the ophthalmic nerve of the fifth pair. The same nerve—the opthalmic branch of the fifth pair sends a twig to the lachrymal gland, another to the cavity of the nose, and the other two to the tensor tarsi muscle; and hence, says M. Trasmondi, that perfect concordance, the admirable consensus which prevails in the action of all these parts, in secretion, absorption, the flow of the tears into the nostrils, &c. M. Trasmondi has likewise shown the bearing of the discovery on fistula lachrymalis, and other diseases connected with the lachrymal passages, and illustrated the whole with engraved designs.—*Anderson's Quarterly Journal.*

Dr. Brewster, on the accommodation of the Eye to different distances.—On this extremely difficult and disputed subject, Dr. Brewster concludes from an experiment made upon viewing a near object.

1st. "That the contraction of the pupil, which accompanies the adjustment of the eye to near objects, does not produce distinct vision by the diminution of the aperture, but by some other action which accompanies it."

2d. "That the eye adjusts itself to near objects by two actions, one of which is *voluntary*, depending wholly on the will; and the other *involuntary*, depending on the stimulus of light."

3d. "That when the voluntary power of adjustment fails, the adjustment may still be effected by the involuntary stimulus of light."

"It appears to me impossible to avoid the conclusion, that the power of adjusting the eye depends on the mechanism which contracts and dilates the pupil; and, since this adjustment is independent of the variation of its aperture, it must be effected by the parts which are in immediate contact with the base of the iris.—The mechanism at the base of the iris, may be conceived to produce the adjustment in four ways. 1st. By elongating the eye during the contraction of the pupil. 2d. By increasing the convexity of the cornea. 3d. By altering the convexity of the capsule of the lens: and 4th. By increasing the distance of the crystaline lens from the retina.—The last hypothesis is the only probable one, namely, the removal of the lens from the retina, by the contraction of the pupil, the eye being adjusted to objects at the remote limits of its range, when in a state of perfect repose."—*ibid.*

On Sublingual Pustules in Hydrophobia. By Dr. Xanthos, of Siphnus, in Greece.

"At the end of January, 1823, as many of my countrymen, compelled by the events which occurred in our country, were travelling from Russia

through Germany to Marseilles, I saw one of them who came from Trapezunt, who had been bitten by a dog in Hanover. He had a considerable wound in the middle of the right thigh, which pained him in walking. Notwithstanding my advice, that he should stop on his journey till the wound was healed, he insisted on setting out the same day with his countrymen, and took nothing with him but a little mild salve. Early in the month of May, I met this man again, with 27 of my countrymen, in Zurich, and was happy to find the wound in a short time completely healed. The man said it was a lucky circumstance that the dog was not mad; upon which a Greek, from the Peloponessus, considerably advanced in years, and well acquainted with the customs of our country, observed that if the dog had been mad, it would not have been of much consequence, all that would have been necessary was to cut out the *Lyssais* as soon as possible; I immediately put the question to him, "What do you mean by the *Lyssais?*' He replied, 'In persons who have been bitten by mad dogs, there appear on the ninth day, little blisters on the tongue, which we call *Lyssais;* these must be cut off with a sharp knife, and the bleeding suffered to continue till the poison is discharged.

"Acquainted with the information which Dr. Marochetti had communicated on this subject, I considered the testimony of this old Greek extremely important. I inquired of my other countrymen, who had lived in various provinces of Greece, whether they were acquainted with this practice; most of them answered in the affirmative; some assured me that they had often witnessed it.

"As my countrymen were too much dispersed in different places to enable me personally to obtain particular information on this subject from each of them, I sent certain questions from Heidelburg, and obtained from Haran, the following answer from Polychronis, a Thessalian:—

"If a man is bitten by a mad dog, on the ninth day small blisters, called *Lyssais*, appear under the tongue; they are about the size of a pea, some of them smaller; they are rather dark coloured, and look like flesh.—They are situated on the under side of the tongue, near the membranous band, particularly on the side of the veins. If you observe the tongue of a sound man, and then examine that of a man who has been bitten by a mad dog, you will immediately see the difference.

"As soon as these *Lyssais* are observed, they must be cut out with a sharp knife, and the bleeding continued, till the poison is discharged. If this is neglected, or deferred too long, as for instance till the twentieth day, the brain becomes affected, and the patient will die in deplorable convulsions.

"Seven Greeks, who were staying at A——, partly natives of Thessaly and Epirus, and partly from the islands of Greece, confirmed this testimony. Another from Lagura, near Larissa, wrote to the same effect, adding that in his country after the *Lyssais* had been cut out, and the wound suffered to bleed a considerable time, a red hot iron was often applied to the part

for several days. An Epirot, K. W. wrote me word from Basil, that in his country, when the *Lyssais* were cut out, and the wound had bled copiously, it was the custom to rub it with garlic and common salt. He assures me that he has often seen this done, and that when this plan has been carefully pursued, the patient after the fortieth day is out of all danger. He adds, that the inhabitants of the neighbouring mountains, after the *Lyssais* have been cut out, wash out a gun-barrel with water, and make the patient wash his mouth with the rinsings.

"Thirteen Greeks staying at Basil confirmed this testimony, with some slight variations.

"A Peloponnessian, 80 years old, who had been in trade from fifteen to twenty years, in Russia, who had since resided at Odessa, and who is now in Switzerland, tells me that he has often employed this method in Russia, with the happiest success.

"In some parts of Greece, it is the custom to apply squeezed river crawfish to the bitten part; a drink is also prepared by squeezing these crawfish and pouring upon them wine or water. The inhabitants of many provinces of Greece have great faith in the efficacy of crawfish in cases of hydrophobia, and use them both internally and externally.

"They do not neglect also to treat the bitten part by burning, excision, escharotics, &c.

"From all this information it appears, that the treatment of hydrophobia throughout Greece, is the same, namely, by excision of the *Lyssais*. A question now arises, whether the peasant by whom Marochetti saw this treatment successfully employed, learnt it from a Greek, or in Greece itself. That it had its origin in Greece, is evident from the name *Lyssais*, which is used throughout that country. Mr. Sieber, the traveller, has lately declared, that he has discovered a remedy for hydrophobia in Greece, which he does not, however, disclose, as he has a view to indemnifying himself by selling the secret. Whether this remedy is that which has been pointed out, or some other, time will show. In the mean time I should have thought myself wanting in the duty which I owe to my fellow-men, if I had not as soon as possible made known to the German physicians, a plan of treatment which is universally adopted in my country, and the success of which has been testified by so many of my countrymen.—Happy shall I be if my information should contribute to the discovery of a remedy for so formidable a disease. If I should obtain any further information on this subject, I will take the first opportunity of communicating it."

New Alkali in Jalap. By Mr. Hume, Jun., of Long Acre.—The author has just extracted from jalap a substance similar to the recently discovered alkalies of opium, bark, nux vomica, &c. Having procured but a small quantity of this new substance, (for which he proposes the name of *jalapine*,) Mr. Hume is not yet enabled to give any satisfactory account of its chemical properties, nor of its action on the animal economy.

The mode of procuring jalapine is very simple. Coarsely-powdered jalap is macerated for twelve or fourteen days in strong acetic acid; a high-coloured tincture is thus obtained, which, when filtered, is to be supersaturated with ammonia, and the mixture violently shaken; a sabulous deposit will fall rapidly, and a few crystals will form on the sides of the vessel. The deposit and crystals are to be collected, and washed with distilled water; again dissolved in a small quantity of concentrated acetic acid, and reprecipitated by ammonia, added to supersaturation, which throws down the jalapine in small, white, acicular crystals. Jalapine is without any perceptible taste or smell, and seems heavier than morphine, quinine, or other substances of this class; it is scarcely, if at all, soluble in cold water, and only to a small extent in hot water. Ether has no effect upon it; alcohol is its proper solvent. Very little trouble is requisite to purify jalapine from extractive or colouring matter, for which it appears to have a very slight affinity. Mr. Hume, jun. operated only upon an ounce of jalap-root, from which quantity he conjectures, that, when the process is conducted with greater accuracy than usually attends a first examination, it will be easy to obtain about five grains of jalapine.—*Quar. Jour.*

Rupture of the Heart, and Perforation of the Stomach.—Dr. Andral, jun., at a late meeting of the Academy of Medicine, read the case of a person who died of the above disease: he had suffered a long time from indigestion, and died suddenly from the effect of strong emotions. The pericardium contained a great quantity of blood; the posterior of the left ventricle presented five oblong perforations, the greatest diameter of which were in the direction of the longitudinal axis of the heart. The heart was not softened in any degree. The stomach showed traces of chronic inflammation, and exhibited, about the centre of its posterior surface, a large circular opening, with soft and round edges. There was no effusion in the peritonium.—*Lon. Med. and Phys. Jour.*

Employment of Iodine in Scrofulous Complaints.—Dr. Henning has administered this remedy in eight cases. The youngest patient was a child two years old only, to whom the tincture was given in doses of five drops, three times a day; and it was administered to an old asthmatic person, who was subject to enlargements in the lymphatic organs about the neck, by which respiration was rendered still more difficult. He took the tincture also in quantity from eight to ten drops, four times a day. At the end of a week a critical sweat came on, which lasted several days; and by still continuing the use of iodine, his complaints were much relieved. In all the other cases, which were chiefly of young females, the best effects were derived from the remedy, without any sinister consequences.—*Lon. Med. Repos.*

BIOGRAPHICAL NOTICE

OF THE LATE

JAMES KENT PLATT, M. D.

Professor of the Institutes of Surgery in the University of Vermont.

It is with no ordinary emotions that we find ourselves called upon to perform the melancholy duty of recording upon our pages a brief memorial of one who was endeared to us by every tie of friendship and respect.

James Kent Platt was born of highly respectable parents at Plattsburgh, in the State of New-York, on the 11th of February, 1792. His father, William Pitt Platt, who still resides at that place, is a younger brother of the Hon. Jonas Platt, late a Judge of the Supreme Court of the State of New-York. Young Platt remained with his parents until the eighth year of his age, when he went to reside with his uncle Moss Kent, Esq. then of Cooperstown, in Otsego county, by whom he was adopted as his own son. As a proof of the deep and tender interest taken in his nephew by Mr. Kent, it need only be stated, that for the eight first years of young Platt's residence with him, he superintended in person the whole of his education, and instructed him in all the various branches of knowledge usually taught as preliminary to an entrance in our colleges. How gratefully young Platt appreciated this more than parental kindness of his relative it is unnecessary to mention.

In 1808, he entered as a student at Middlebury College in Vermont, and graduated with great credit to himself in 1812. In the autumn of the same year he became a resident graduate at Yale College in New-Haven, where he remained until the ensuing spring, and availed himself of the instructions of the late President Dwight. Having thus completed a very extensive course of preliminary education, he commenced, in 1813, the study of medicine under Dr. Moers of Plattsburgh, and in the winter of the same year attended the medical lectures in the University of Pennsylvania. In the ensuing year he became a private pupil of Dr. Hosack; and in the spring of 1816 received his diploma of Doctor in Medicine from the College of Physicians and Surgeons of New-York, on which occasion he wrote and defended a thesis "On Gout." During his pupilage in New-York, although his constitution had always been feeble, and his health had now become exceedingly precarious, Dr. Platt distinguished himself by his assiduity in the acquisition of knowledge, while his talents and manly virtues commanded the universal respect and affection of his associates.

That nothing might be wanting to complete the education of a youth so promising, it was determined that he should visit Europe. It was also fondly hoped by his friends that a voyage across the Atlantic might be the means of improving his health, and of prolonging a life already threatened with a

premature termination. He accordingly sailed from this country in 1816, and remained abroad upwards of two years, the greater part of which was spent at those great seats of medical instruction, London and Paris. Previous to his return, he was made a member of the College of Surgeons of London. Ardent in his disposition, and enthusiastic in his attachment to his profession, it is to be feared that Dr. Platt, while accumulating treasures of information, was not sufficiently attentive to his health. At any rate, his friends with regret beheld him return to his native country with the same frail and emaciated form in which he had left them. Dr. P. now commenced the practice of his profession in New-York under circumstances quite auspicious success and to his future distinction. He soon found, however, that the atmosphere along the sea-coast was too keen for his feeble lungs, and he determined to change his residence for some place in the interior. He accordingly removed to Plattsburgh, in the State of New-York. After pursuing his profession there for about a year, thinking his health sufficiently re-established, he returned to this city. In a few months his enfeebled health again compelled him to abandon New-York, and to seek a warmer climate. He sailed for the island of St. Croix, where he remained for some months; but not finding his health much benefited by the voyage and the subsequent residence on the island, he returned to this country.

In 1823, he received the honourable appointment of Professor of the Institutes of Surgery in the University of Vermont. It may easily be imagined that, situated as Dr. Platt was, with his constitution daily wasting away under a fatal disease, the undertaking of an enterprise like this must necessarily have been attended with extreme hazard. He was not, however, to be deterred by such considerations from entering the lists of honourable competition. He accordingly accepted the appointment which had been proffered to him, and in the winter of 1823–4 delivered a course of lectures on surgery, which is spoken of in terms of the highest commendation. The effort, however, was too great, and he had scarcely finished his course, when the pulmonary disease with which he had so long struggled, developed itself with fatal rapidity, and in a few weeks terminated his earthly career.

Such is a brief sketch of the life of one, who, if he had been spared to maturer years would, without doubt, have become a distinguished ornament of the profession to which he belonged. As it is, it is consolatory to reflect that he has left behind him a bright example of early talent and virtue, which it is to be wished may not prove altogether unavailing.

In his manners he was simple, unaffected, and manly. His conduct was uniformly governed by principles of nice honour and strict integrity. As a friend, he was sincere, disinterested, and generous. His heart was the seat of every honourable principle and ennobling sentiment, and what is of still greater importance, his whole life evinced that he was under the constant influence of religious responsibilities. There are few perhaps who have left this world at so early an age whose worth was more generally con-

fessed, and whose character was more universally admired by all who knew him.

Besides several anonymous productions on medical subjects, characterized by much acuteness of intellect, Dr. Platt published two interesting papers—the one "A Case of Hydrops Articuli occurring in the shoulder," the other "A Case of Epistaxis successfully treated by Immersion, communicated in a letter to Dr. John B. Beck, of New-York." The former of these appeared in the American Medical Recorder, Vol. IV. and the latter in the Philadelphia Journal of the Medical and Physical Sciences, Vol. II.

J. B. B.

NOTICES.

Medical Society of the County of New-York.

At an annual meeting of the Medical Society of the County of New-York, July 6, 1824, the following Officers were elected for the ensuing year:

DAVID HOSACK, M. D. F. R. S. *President.*
JOHN WATTS, Jr. M. D. *Vice-President.*
FELIX PASCALIS, M. D. *Corresponding Secretary.*
NICOLL H. DERING, M. D. *Secretary.*
Dr. DAVID ROGERS, *Treasurer.*
SAMUEL W. MOORE, M. D.
JOHN C. CHEESMAN, M. D.
JOHN B. BECK, M. D.
Dr. PETER C. TAPPEN,
JOHN STEARNS, M. D. } *Censors.*

Delegate to the State Society.
JAMES R. MANLEY, M. D.

University of the State of New-York.—College of Physicians and Surgeons.

CITY OF NEW-YORK, Aug. 26th, 1824.

The College of Physicians and Surgeons will commence their Course of Lectures, for the ensuing session, on the first Monday of November next, (the 2d,) at the College in Barclay-street.

Dr. HOSACK, *on the Theory and Practice of Physic, and Clinical Medicine.*
Dr. MACNEVEN, *on Chemistry.*
Dr. MITCHILL, *on Botany and Materia Medica.*
Dr. POST, *on Anatomy.*
Dr. MOTT, *on Surgery.*
Dr. FRANCIS, *on Obstetrics and the Diseases of Women and Children.*

THE BOARD OF TRUSTEES hereby make it known, that, in conformity with the ordinances of the Honourable the Regents of the University, and the laws of the state of New-York, every Student is required to attend two full courses of all the Lectures delivered in this College before he can be admitted as a candidate for the Doctorate; unless said Student shall previously have attended Lectures in said College prior to the session of 1822–3, or shall have attended one entire course of Lectures delivered in some respectable School or University. The candidate must, also, have studied Medicine three years with some respectable practitioner, have arrived at the age of twenty-one years, and it is expected that he produce written testimony in relation to those several points.

The Matriculation Ticket is five dollars, which entitles the holder to the use of the College Library for one year.

By order,

WRIGHT POST, M. D. *President.*
JOHN W. FRANCIS, M. D. *Registrar.*

University of the State of New-York.—College of Physicians and Surgeons of the Western District, at Fairfield, Herkimer county.

The Lectures at this Institution will commence on the first Tuesday in November next, and continue during the space of sixteen weeks.

JOSEPH WHITE, M. D. *on Surgery.*
WESTEL WILLOUGHBY, M. D. *on Obstetrics.*
JAMES HADLEY, M. D. *on Chemistry and Materia Medica.*
T. ROMEYN BECK, M. D. *on the Practice of Physic and Medical Jurisprudence.*
JAMES M'NAUGHTON, M. D. *on Anatomy and Physiology.*

The Tickets for attending the Lectures are as follows:

For Anatomy and Physiology,	$12
Chemistry and Materia Medica,	12
Surgery,	10
Midwifery,	10
Practice of Physic and Medical Jurisprudence,	10

During the present year, very important and extensive additions have been made to the anatomical museum, obstetrical apparatus, and the chemical laboratory, by the Professor of Anatomy, who has visited Europe for that purpose.

By order,

JAMES HADLEY, M. D. *Registrar.*

Medical School of South Carolina.

The Medical Society of South Carolina having organized a School of Medicine, agreeably to the powers conferred at the last session of the Legislature, the following details are made for the information of the public:

The professors elected are—
JOHN EDWARD HOLBROOK, M. D. *Professor of Anatomy.*
JAMES RAMSAY, M. D. *Professor of Surgery.*

SAMUEL HENRY DICKSON, M. D. *Professor of the Institutes and Practice of Physic.*

THOMAS G. PRIOLEAU, M. D. *Professor of Obstetrics and the Diseases of Women and Infants.*

HENRY R. FROST, M. D. *Professor of Materia Medica.*

EDMUND RAVENEL, M. D. *Professor of Chemistry and Pharmacy.*

STEPHEN ELLIOTT, LL. D. *Professor of Natural History and Botany.*

A Matriculating Ticket to be paid for at the first session.

In order to entitle an individual to examination for a degree, it will be necessary that he shall have attained the age of 21 years, be of good moral character, and have studied Medicine for two years with some established practitioner. He shall also have taken the Ticket of each Professor for two Courses of Lectures, or shall have attended one full Course at some other respectable Medical School, previously to his becoming a member of this Institution. Students who have for two seasons taken the Tickets of any or all of the Professors, shall be thereafter entitled to admission into his or their Lecture Room without further expense.

The Lectures will commence on the second Monday in November next, and will continue for five months. The Anatomical Lecture Room is lighted from the top of the building, and the seats are elevated sufficiently for the convenience of the Students. Arrangements for private dissections are particularly attended to, and every facility afforded for the acquirement of a minute knowledge of the structure of the human frame, and the preparation and preservation of its different parts. The Chemical Laboratory is contained in the same building, and such apparatus procured as is necessary to a full experimental course. The Library belonging to the Medical Society will be opened to the Students upon the most liberal terms; and it is only doing justice to that body to acknowledge that their collection of Medical Works is among the largest and most select in the United States.

The privilege of visiting the patients in the Marine Hospital and Poor-House affords the best opportunities for the acquisition of practical knowledge without additional expense. During the daily attendance of the physicians of these Institutions, such clinical remarks are made as are of importance to the Medical Student.

All operations in Surgery, occurring in these establishments, will be free to the class, in addition to such cases in private practice as may be operated on in the public institutions.

From the statements made, it appears that every opportunity of acquiring medical information will be afforded to the Southern Student by the Medical College of South Carolina, and that at a rate of expenditure very trivial. But some advantages of a peculiar character are connected with this Institution, which it may be proper to point out.

No place in the United States offers as great opportunities for the acquisition of anatomical knowledge, subjects being obtained from among the coloured population in sufficient number for every purpose, and proper dissections carried on, without offending any individual in the community. Those impediments which exist in so many other places, to the prosecution of this study, are not here thrown in the path of the Student, public feeling being rather favourable than hostile to the advancement of the Science of Anatomy.

In addition, the Southern Student can nowhere else receive correct instruction on the diseases of his own climate, or the peculiar morbid affections of the coloured population.

THOMAS G. PRIOLEAU, *Dean of the Faculty.*

Charleston, June 19, 1824.

At the late Commencement held at the Allegheny College in Pennsylvania, the Degree of Doctor of Medicine was conferred upon STEPHEN N. BROWN of New-York.

TO READERS AND CORRESPONDENTS.

For the purpose of giving place to the numerous contributions of our friends, an Essay on Cynanche Laryngea, by the Junior Editor, has been postponed until our next number, which will also contain a Review of Dr. Frick's Treatise on Diseases of the Eye, together with communications from Drs. Madianna, D. L. Rogers, Waterhouse, Staats, &c. &c.